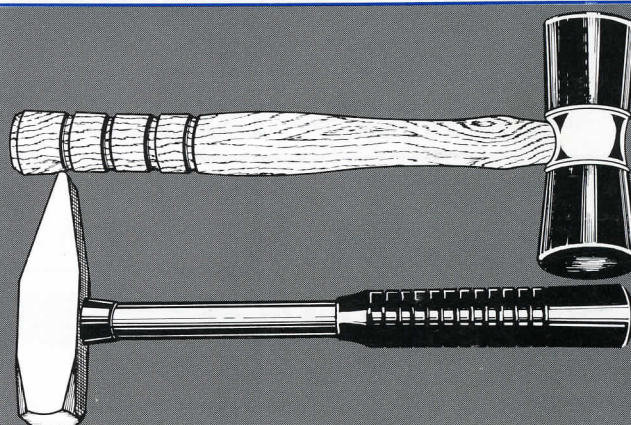
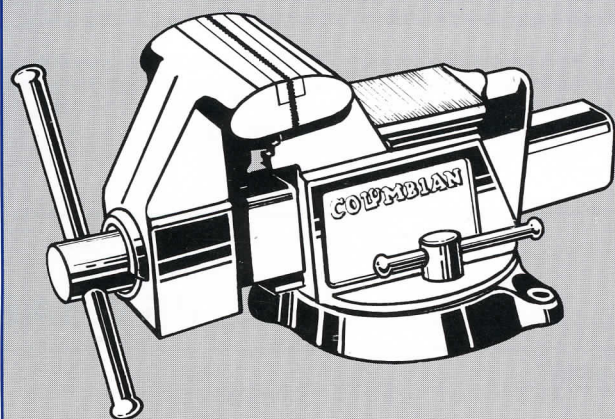
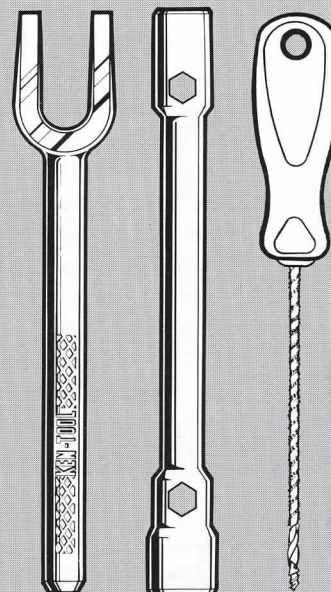
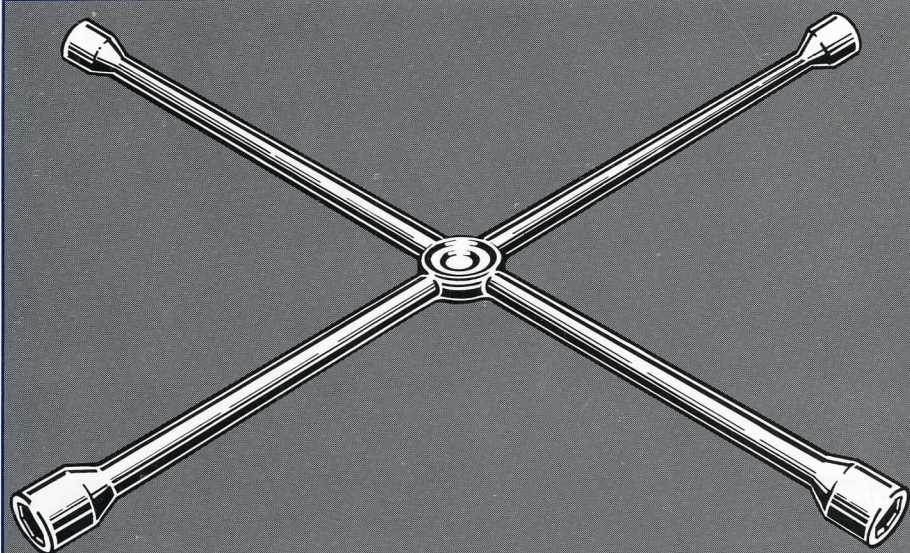


Ken-Tool[®]

COLUMBIAN[®]



TIRE SERVICE EQUIPMENT
MacPHERSON STRUT SPECIALTY TOOLS
SAFETY CAGES • VISES • CLAMPS • HAMMERS

WE MAKE TOOLS,
BUT WE SELL SATISFACTION...

QUICK REFERENCE INDEX

Bead Breaking Tools.....	8
Bead Seaters and Bead Expanders.....	13
C-Clamps/ Assortments.....	18, 19
Dual Wheel Lug Stud Remover, NEW	10
Emergency Wheel Lock Remover, NEW	11
Four-Way Lug Wrenches.....	3
General Purpose Tools and Equipment.....	12
MacPherson Strut Service Tools.....	14, 15
Pry Bars, NEW	2
Replacement Handles/Glue Kits.....	6, 7
Safety Equipment.....	9
Special Wrenches for Stubborn Nuts.....	10
Tire Hammers w/Wood or Fiberglass Handles.....	6, 7
Tire and Rim Service Tools.....	11
Tire Mounting and Dismounting Tools.....	5
Tire Reamer Rasps, NEW	12
Tool Boards and Sets.....	9
Truck Tire Tools.....	4
Vises.....	16, 17, 18
Wedges — Wood and Steel.....	7
Pro Wheel Cover Puller/ Replacer, NEW	11
Index and Part No. - EDP No. Cross Reference Chart.....	Back Cover

ONE STOP SHOPPING

Through the efforts of the Warren Tool Corporation, Ken-Tool can now make available to our customers, the fine lines of Ken-Tool, Columbian Vise, Warren Tool and Hargrave Tool. All items are ordered and shipped together, thus minimizing your number of orders, shipments, receipts and invoices. Any item in this catalog can now be combined for freight and all shipped from our Ken-Tool warehouse in Akron, Ohio.

Ken-Tool® COLUMBIAN®
HARGRAVE
WARREN TOOLS

KEN-TOOL WARRANTY

Ken-Tool products are guaranteed for fitness and merchantability. Any tool, where adjustment is asked for, should be returned to your distributor, provided it has been used for the purpose for which it has been designed. Tools that have been abused or have worn out in normal usage cannot be adjusted nor can any tools that have been heated, ground or subjected to unreasonable leverage. Our local sales personnel will make periodic visits to adjust tools covered by this policy.

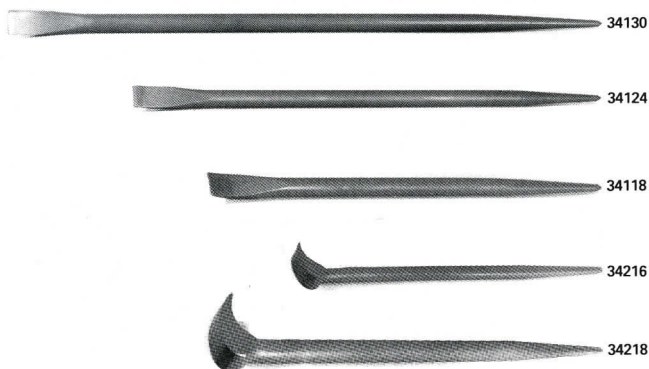
Many tools are made up of parts. When warranty conditions exist, please order repair parts instead of destroying the entire product. Items that fall under this category are: Vises, Hammers, T115, T26B, T98, T99B, TR43, TR44X, TR44SW, TR41, TR42, T130, T54, B260.

Ken-Tool®

PRY BARS

NEW

PRY BARS



NEW

PRY BARS

All our Ken-Tool pry bars are:

- Forged from top-quality steel.
- Heat treated to resist breaking or bending.
- Use them for prying, positioning, and aligning jobs.
- Long, pointed taper can be used as a lining-up drift.
- Roll-head increases leverage.

PART NO.	DESCRIPTION	LENGTH	STOCK
34130	Jimmy Bar	30"	7/8" Round Stock
34124	Jimmy Bar	24"	3/4" Round Stock
34118	Jimmy Bar	18"	5/8" Round Stock
34216	Roll Head Pry Bar	16"	5/8" Round Stock
34218	Roll Head Pry Bar	18"	3/4" Round Stock

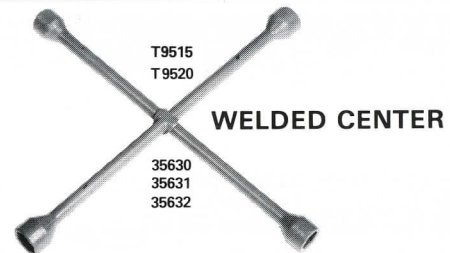
Ken-Tool offers the largest selection of quality lug wrenches for both cars and trucks. Top quality steel and strengthened centers make Ken-Tool wrenches tough and long-lasting.

PART NO.	EDP NO.	LENGTH	STOCK	WEIGHT	SOCKET SIZES
PASSENGER CAR SIZES					
DROP-FORGED CENTER					
Gold painted, polished sockets.					
DELUXE PROFESSIONAL FOUR-WAY WRENCH					
T57	35657	23"	5/8"	4-3/4 #	3/4", 13/16", 7/8", 15/16"
DELUXE PROFESSIONAL METRIC FOUR-WAY					
T56	35656	18"	5/8"	4 #	17mm, 18mm, 19mm, 21mm
WELDED CENTER					
4-way lug wrenches designed for extra strength. Sizes and styles to fit all of your tire changing needs — including metric. Deep sockets will handle most standard lug nuts.					
PROFESSIONAL SIZE					
T59	35659	22"	5/8"	4-1/2 #	3/4", 13/16", 7/8", 15/16"
STANDARD FOUR-WAY WRENCH					
T61	35661	22"	9/16"	3-3/4 #	3/4", 13/16", 7/8", 15/16"
COMPACT SIZE WRENCH					
T62	35662	17"	9/16"	3-1/4 #	3/4", 13/16", 7/8", 15/16"
METRIC SIZES FOR FOREIGN CARS					
T63	35663	15"	9/16"	2-3/4 #	17mm, 18mm, 19mm, 21mm
ECONOMY FOUR-WAY WRENCHES					
An ideal wrench for the do-it-yourselfer. Welded center provides the strength needed for the occasional tire changer. Perfect to keep in the trunk of the car for emergency changes.					
STANDARD SIZE					
T9520	35620	20"	9/16"	3-1/2 #	3/4", 19mm, 13/16", 7/8"
COMPACT SIZE					
T9515	35615	15"	9/16"	2-3/4 #	3/4", 19mm, 13/16", 7/8"
20" SAE CHROME FOUR-WAY (IMPORT)					
—	35630	20"	—	3-3/4 #	3/4", 7/8", 13/16", 19mm
14" SAE CHROME FOUR-WAY (IMPORT)					
—	35631	14"	—	2 #	3/4", 13/16", 7/8", Pry.
14" METRIC CHROME FOUR-WAY (IMPORT)					
—	35632	14"	—	2 #	17mm, 19mm, 21mm, Pry.
LIGHT TRUCK SIZE — WELDED CENTER					
LIGHT TRUCK FOUR-WAY					
T90	35690	25"	3/4"	7 #	7/8", 15/16", 1", 1-1/16"
HEAVY DUTY TRUCK FOUR-WAYS					
DROP-FORGED CENTER					
HEAVY DUTY TRUCK, BUS, TRACTOR FOUR-WAY					
Center hole for leverage bar.					
T95	35695	27 1/2"	1"	13-1/2 #	1-1/16", 1-1/4", 1-1/2", 13/16" square
HEAVY DUTY SOLID CENTER					
T96	35696	27 1/2"	1"	14-1/2 #	1-1/16", 1-1/4", 1-1/2", 13/16" square
THREE SOCKETS AND 3/4" SERVICE ARM					
One arm designed to take any 3/4" impact socket. Center hole for leverage bar.					
T95A	35697	28"	1"	13-1/2 #	1-1/4", 1-1/2", 13/16" square

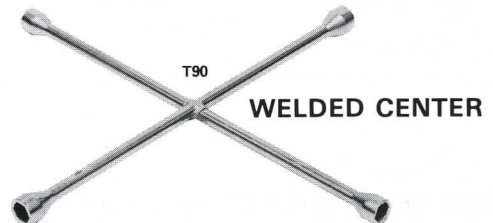
PASSENGER CAR SIZES



ECONOMY FOUR-WAY WRENCHES



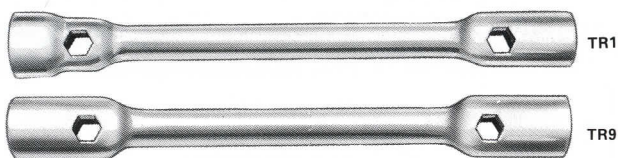
LIGHT TRUCK SIZE



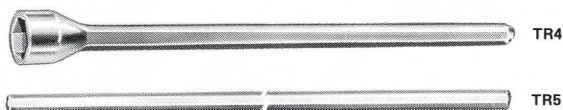
HEAVY DUTY TRUCK FOUR-WAYS



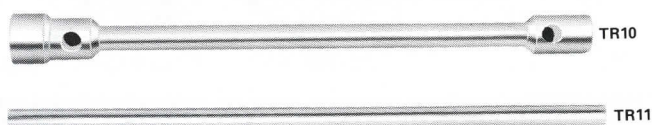
DOUBLE END TRUCK WRENCHES



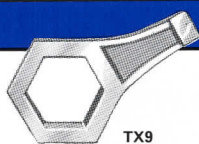
LEVERAGE BARS - 3/4" HEX



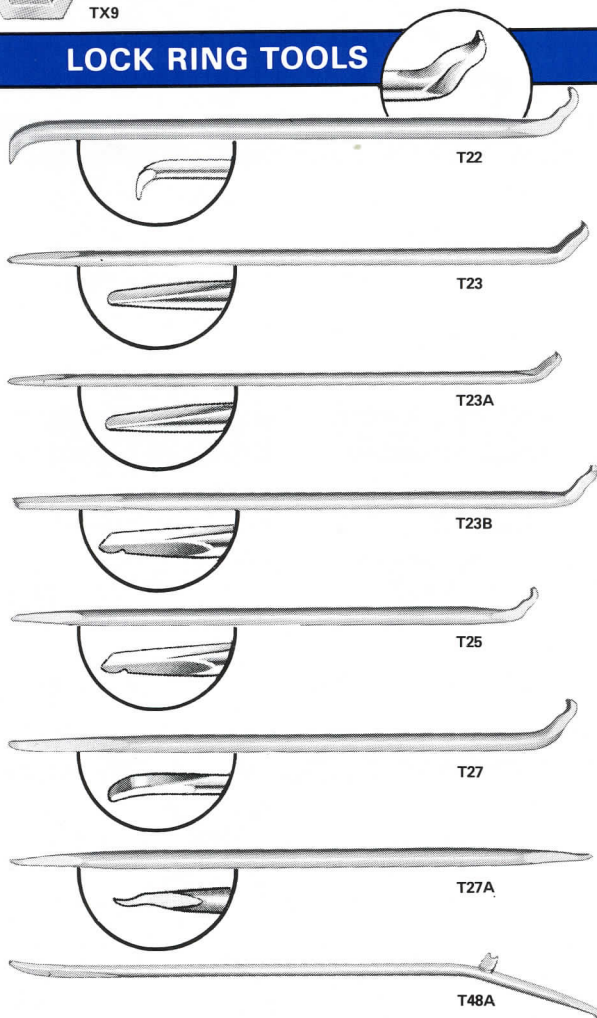
HEAVY DUTY



BUDD NUT WRENCH



LOCK RING TOOLS



DOUBLE END TRUCK WRENCHES

Double end truck wrenches for on-the-road service. Sizes available for all standard lug nuts. Constructed from 1" high quality steel for greatest strength and durability. All will take our standard TR5 leverage handle. Handle hex opening: 3/4".

PART NO.	EDP NO.	LENGTH	WEIGHT	SOCKET SIZES
TR1	32501	16"	4-1/2 #	1-1/8", 13/16" square, 1-1/2"
TR2	32502	16"	4-1/2 #	1", 1-1/4", 5/8" square
TR2X	32504	16"	4-1/2 #	15/16", 7/8"
TR3	32503	16"	4-1/2 #	7/8", 1-1/16"
TR3A	32505	16"	4-1/2 #	1-1/8", 1-1/16"
TR3X	32506	16"	4-1/2 #	1-1/16", 1-3/16"
TR9	32509	16"	4-1/2 #	1-1/4", 1-1/16"
TR9B	32508	16"	4-1/2 #	1-1/2", 13/16" square

LEVERAGE BARS - 3/4" HEX

PART NO.	EDP NO.	DESCRIPTION	LENGTH	WEIGHT
TR4	32314	With 1-3/16" socket	22"	3-1/4 #
TR6	32316	With 1-1/16" socket	22"	3-1/4 #
TR97	32317	With 1-1/4" socket	22"	3-1/4 #
TR5	32318	Truck Wrench Handle	22"	3 #

HEAVY DUTY TRUCK WRENCHES

15/16" SQUARE HEAVY DUTY TRUCK WRENCH

Heavy duty truck wrench for off-the-road budd type wheels. Similar in design to our popular double end truck wrenches but made of 1-1/4" stock.

PART NO.	EDP NO.	LENGTH	STOCK	WEIGHT	HEX
TR10	34401	29-1/2"	1-1/4"	12-1/2 #	1-3/4"
HANDLE FOR TR10 (34401) TRUCK WRENCH					
TR11	34402	30"	1"	6-1/2 #	—

BUDD NUT WRENCH

Holds outer cap nut while turning inner. Lip fits in bolt hole when bolt is out to prevent wrench from turning.

TX9	30609	—	—	14 oz.	1-1/2"
-----	-------	---	---	--------	--------

LOCK RING TOOLS

PART NO.	EDP NO.	LENGTH	STOCK	WEIGHT
COMBINATION RING TOOL				
T22	32122	18"	5/8"	1-1/2 #
TRUCK LOCK RING REMOVER				
T23	32123	24"	11/16"	2-1/4 #
TRUCK LOCK RING REMOVER				
T23A	33223	30"	11/16"	2-1/2 #
COMBINATION RIM - RING TOOL				
T23B	33224	23-1/2"	11/16"	2-1/2 #
5 DEGREE RIM LOCK TOOL				
T25	32125	18"	5/8"	1-3/4 #
SPECIAL LOCK RING TOOL				
T27	32127	18"	5/8"	1-3/4 #
LOCK RING TOOL				
T27A	32128	18"	5/8"	1-3/4 #
LOCK RING TOOL				
T48A	34648	37"	3/4"	4-3/4 #

TUBELESS TIRE IRON SETS

Tubeless tire irons for large, wide base, hi-ply rating tires including industrial, farm flotation, tractor and standard truck tires. Each set contains three mount/demount tools: two straight, one offset. Two sized sets for all tire changing requirements.

T46 (34746) LIGHT DUTY TIRE IRON SET

Stock: 3/4". Weight: 12 Lbs. Includes all three irons:

PART NO.	EDP NO.	LENGTH	WEIGHT
T46A	34747	36"	4-1/2 #
T46B	34748	36"	4-1/2 #
T46C	34749	22"	3 #

T47 (34846) HEAVY DUTY TIRE IRON SET

Stock: 1". Weight: 30 Lbs. Includes all three irons:

PART NO.	EDP NO.	LENGTH	WEIGHT
T47A	34847	52"	11 #
T47B	34848	49-1/2"	11 #
T47C	34849	27"	8 #

TUBELESS TIRE IRONS

PART NO.	EDP NO.	LENGTH	STOCK	WEIGHT
----------	---------	--------	-------	--------

TRUCK TUBELESS TIRE IRON

Used in pairs. Our most popular tubeless tire tool for mounting and demounting tubeless truck tires.

T45A	34645	37"	3/4"	4-1/2 #
------	-------	-----	------	---------

TUBELESS TIRE IRON

Works on passenger, industrial, and motorcycle tires. Used in pairs.

T6A	32106	16-1/2"	5/8"	1-1/2 #
-----	-------	---------	------	---------

T143A (34660) MOUNT/DEMOUNT TIRE TOOL

Works on most center-post tire changers. For all 12" to 17" full or semi-drop center wheels. Weight: 5-1/2 lbs.

TIRE SPOONS

General purpose tire irons. . .straight. . .curved. . .drop center. . . sizes for all your mounting or demounting needs.

PART NO.	EDP NO.	LENGTH	STOCK	WEIGHT
----------	---------	--------	-------	--------

STRAIGHT SPOON TIRE IRONS

T1X	32101	18"	11/16"	1-3/4 #
T19	32119	24"	11/16"	2-1/2 #
T19A	33219	30"	11/16"	3 #
T38	33238	30"	7/8"	4-3/4 #

CURVED SPOON TIRE IRONS

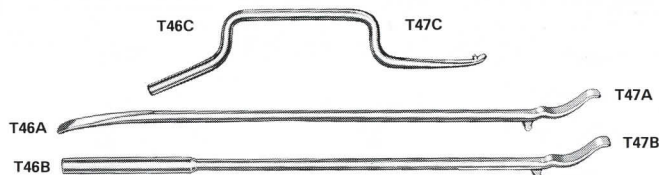
T2X	32102	18"	11/16"	1-3/4 #
T20	32120	24"	11/16"	2-1/4 #
T20A	33220	30"	11/16"	3 #
T39	33239	30"	7/8"	4-1/2 #

DROP CENTER TIRE IRON

T21R	32121	18"	11/16"	1-3/4 #
------	-------	-----	--------	---------

**WHENEVER CHANGING TIRES
WE RECOMMEND YOU ALWAYS
FOLLOW MANUFACTURER'S
SUGGESTED PROCEDURES.**

TUBELESS TIRE IRON SETS



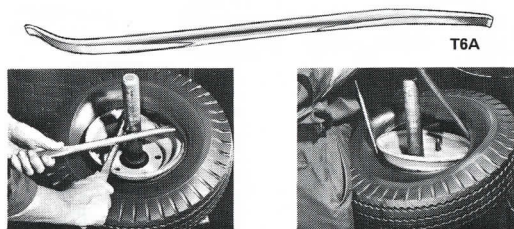
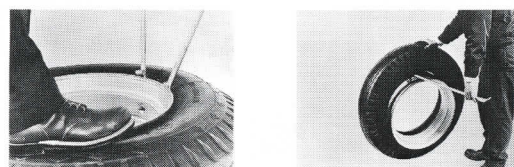
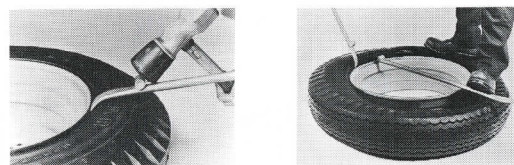
MOUNTING



DEMOUNTING



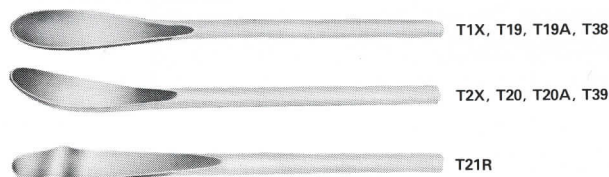
TUBELESS TIRE IRON



MOUNT/DEMOUNT TIRE TOOL



TIRE SPOONS



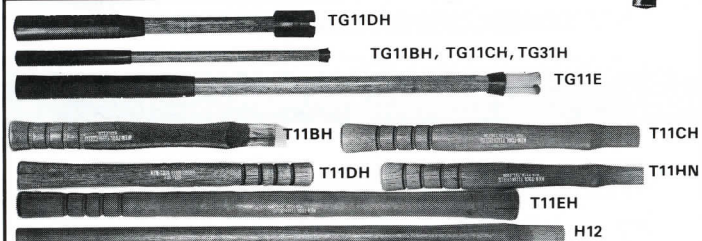
Our tools are made in various types and sizes, with different configurations for specific purposes. They should be selected for their intended use and used only for those purposes. . . Makes tire changing faster and easier. . . for passenger, truck, bus, farm, tractor, aircraft tires.



NU-LOK adaptor prevents head from loosening



REPLACEMENT HANDLES



Always wear safety goggles when using striking or struck tools. Never use one hammer to strike another hammer. Never use a striking tool with loose or damaged handle. Discard any striking or struck tool if tool shows dents, cracks, chips, mushrooming or excessive wear.

BEAD BREAKING HAMMERS

* NU-LOK Adapters

PART NO.	EDP NO.	HANDLE STYLE	LENGTH	WEIGHT	REPLACEMENT HANDLE
T11C	35319	Wood	16-1/2"	5-1/2 #	T11CH (35119)
TG11C	35419	FG	18"	5-3/4 #	TG11CH (35219)
T11D	35327	Wood	17"	5-1/2 #	T11DH (35127)
*TG11D	35427	FG	18"	6 #	TG11DH (35227)
T11E	35329	Wood	30"	8-3/4 #	T11EH (35129)
*TG11E	35429	FG	32"	9-1/2 #	TG11EH (35229)

HEAVY DUTY TIRE HAMMERS

PART NO.	EDP NO.	HANDLE STYLE	LENGTH	WEIGHT	REPLACEMENT HANDLE	REPLACEMENT RUBBER HEAD
T34	35321	Wood	17"	5-3/4 #	T11CH (35119)	T34RH (35105)
TG34	35421	FG	18"	6 #	TG11CH (35219)	T34RH (35105)
T35	35323	Wood	16-1/2"	6-1/2 #	T11CH (35119)	T34RH (35105)
TG35	35423	FG	18"	7 #	TG11CH (35219)	T34RH (35105)
T36	35325	Wood	16-1/2"	5-3/4 #	T11CH (35119)	T34RH (35105)
TG36	35425	FG	18"	6 #	TG11CH (35219)	T34RH (35105)

GENERAL PURPOSE TIRE HAMMERS

PART NO.	EDP NO.	HANDLE STYLE	LENGTH	WEIGHT	REPLACEMENT HANDLE	REPLACEMENT RUBBER HEAD
T11B	35311	Wood	14-1/2"	4-1/2 #	T11BH (35111)	—
TG11B	35411	FG	16"	4-1/2 #	TG11BH (35211)	—
T11R	35313	Wood	14"	2-3/4 #	T11HN (35113)	T11RH (35104)
TG11R	35413	FG	16"	3-1/4 #	TG31H (35206)	T11RH (35104)
T31	35315	Wood	14-1/2"	3-1/2 #	T11HN (35113)	T11RH (35104)
TG31	35415	FG	16"	3 #	TG31H (35206)	T11RH (35104)
T32	35310	Wood	17"	2-1/4 #	—	—
T33R	35317	Wood	14"	2-1/2 #	T11HN (35113)	T11RH (35104)
TG33R	35417	FG	16"	3 #	TG31H (35206)	T11RH (35104)
TG37	35431	FG	32"	9-1/2 #	TG37H (35231)	—

FINEST REPLACEMENT HANDLES FIBERGLASS

Fiberglass handle with ferrule collar. Assembly instructions included.

TG11BH (35211) FOR TG11B. Length: 16". Weight: 1-1/4 lbs.

TG11CH (35219) FOR TG11C, TG34, TG35, TG36. Length: 18".

Weight: 2-1/2 lbs.

TG11DH (35227) FOR TG11D (w/Nu-lok adapter). Length: 18".

Weight: 2-1/2 lbs.

TG11EH (35229) FOR TG11E (w/Nu-lok adapter). Length: 32".

Weight: 3 lbs.

TG31H (35206) FOR TG11R, TG31, TG33R. Length: 16". Weight: 3 lbs.

TG37H (35231) FOR TG37 (w/Nu-lok adapter). Length: 32".

Weight: 3 lbs.

TG11EH-1 (35229-01) NU-LOK ADAPTER FOR TG11EH.

TG11DH-1 (35227-01) NU-LOK ADAPTER FOR TG11DH.

TG37H-1 (35231-01) NU-LOK ADAPTER FOR TG37H.

TOP QUALITY U.S. HICKORY HANDLES

T11BH (35111) FOR T11B. Length: 15". Weight: 3/4 lbs.

T11CH (35119) FOR T11C, T34, T35, T36. Length: 17". Weight: 3/4 lbs.

T11DH (35127) FOR T11D. Length: 17". Weight: 3/4 lbs.

T11EH (35129) FOR T11E. Length: 30". Weight: 1-1/4 lbs.

T11HN (35113) FOR T11R, T31, T33R. Length: 15". Weight: 1/2 lbs.

H12 (37309) FOR 84H-8 (formerly T37HN). Length: 32-1/2". Weight: 1 lb.

REPLACEMENT RUBBER HEADS

T11RH (35104)

T34RH (35105)

Ken-Tool® EPOXY KITS/WEDGES

EPOXY KITS

For repairing and replacing fiberglass handles.

T12B (35201) FOR SMALL HAMMERS: TG11B, TG11R, TG31, TG33R. Weight: 1/4 lb.

T12D (35202) FOR LARGE HAMMERS: TG11C, TG11D, TG11E, TG34, TG35, TG36, TG37. Weight: 3/4 lb.

WEDGES — WOOD AND STEEL

T11W (35103) STEEL WEDGE FOR SMALL HAMMERS: T11B, T11R, T33R. Sold in pairs. Weight: 1 oz.

T11WH (35102) STEEL WEDGE FOR LARGE HAMMERS: T11C, T11D, T11E, T34, T35, T36, T37. Sold in pairs. Weight: 1 oz.

T11EW (35101) ONE WOOD WEDGE FOR ALL WOOD HANDLED HAMMERS. Weight: 1 oz.

EPOXY KITS



WEDGES



WARREN HAMMERS

All American Made. Our exacting standards in the control of raw materials and heat treatment assures you and your customers the finest quality and superior product performance available.

CROSS PEIN HAMMERS

High carbon steel, heat treated. Machined, polished face. Top grade U.S. hickory handle.

PART NO.	EDP NO.	WEIGHT	HANDLE LENGTH	EYE NO. 2 SIZE	FACE
85H-3	37103	3 #	15"	3/4"x1"	1-5/8"

ENGINEERS' HAMMERS

High carbon steel, heat treated. Machined, polished faces. Top grade U.S. hickory handle.

PART NO.	EDP NO.	WEIGHT	HANDLE LENGTH	EYE NO. 2 SIZE	FACE
84H-2	37302	2 #	15"	3/4"x1"	1-1/2"
84H-4	37304	4 #	15"	3/4"x1"	1-3/4"

Packed 10 Per Carton. (Handled)

DOUBLE FACE SLEDGES

High carbon steel, heat treated. Machined, polished faces. Top grade U.S. hickory handle.

PART NO.	EDP NO.	WEIGHT	HANDLE LENGTH	EYE NO. 2 SIZE	FACE
84H-6	37306	6 #	32"	1"x1-1/4"	2-1/8"
84H-8	37308	8 #	32"	1"x1-1/4"	2-1/4"
84H-10	37310	10 #	34"	1"x1-3/8"	2-1/2"
84H-12	37312	12 #	34"	1"x1-3/8"	2-5/8"
84H-16	37316	16 #	34"	1"x1-3/8"	2-7/8"
84H-20	37320	20 #	36"	1-1/4"x1-1/2"	3"

6, 8, 10 and 12 Lb. Packed-5 Per Carton.
16 Lb. Packed-3 Per Carton. (Handled)

NEW ENGLAND (SHORT) PATTERN HAND DRILLING HAMMERS

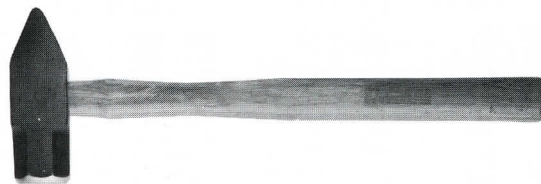
High carbon steel, heat treated. Machined, polished faces. Top grade U.S. hickory handle.

PART NO.	EDP NO.	WEIGHT	HANDLE LENGTH	EYE NO. 2 SIZE	FACE
80H-2	37002	2 #	10-1/2"	3/4"x1"	1-1/4"
80H-3	37003	3 #	10-1/2"	3/4"x1"	1-1/2"
80H-4	37004	4 #	10-1/2"	3/4"x1"	1-9/16"

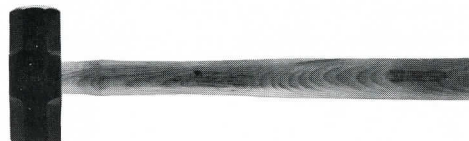
5 Per Carton. (Handled)

**ALWAYS WEAR SAFETY GOGGLES
WHEN USING ANY STRIKING TOOL**

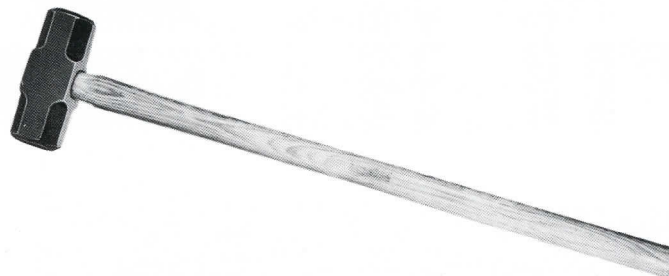
CROSS PEIN HAMMERS



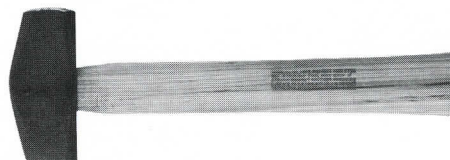
ENGINEERS' HAMMERS



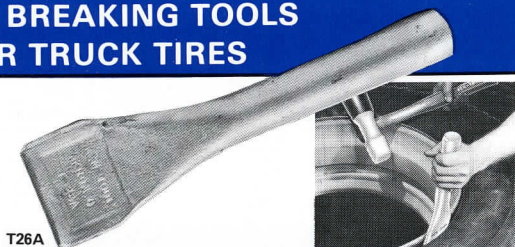
DOUBLE FACE SLEDGES



NEW ENGLAND (SHORT) PATTERN HAND DRILLING HAMMERS

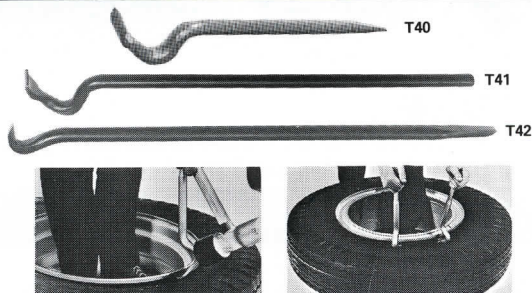


BEAD BREAKING TOOLS FOR TRUCK TIRES



T26A

SWAN NECK BEAD TOOL AND FORCING TOOL

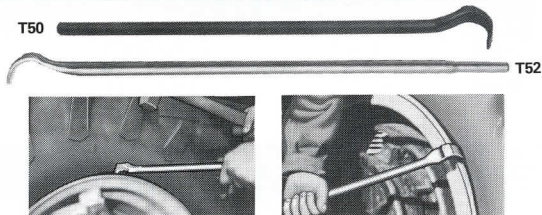


T40

T41

T42

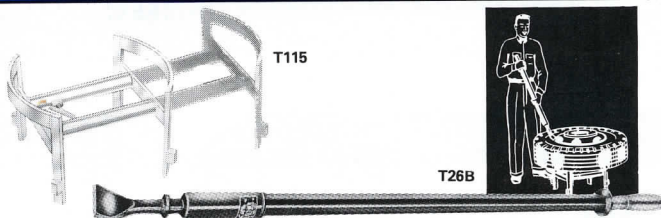
BEAD BREAKER - LEVERAGE BAR



T50

T52

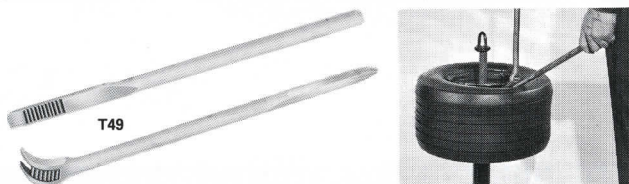
TRUCK TIRE CHANGING STAND HEAVY DUTY IMPACT BEAD BREAKER



T115

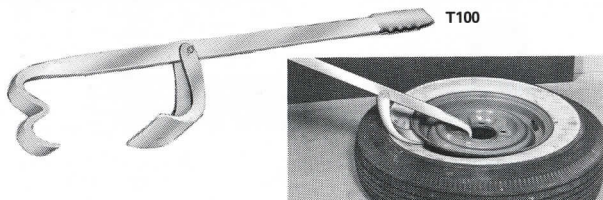
T26B

PASSENGER TIRE BEAD BREAKERS BEAD BREAKER IRON SET



T49

PORTABLE BEAD BREAKER



T100

PART NO.	EDP NO.	LENGTH	STOCK	WEIGHT
----------	---------	--------	-------	--------

BEAD BREAKING TOOLS FOR TRUCK TIRES

DRIVING IRON

For loosening rusted truck and bus beads.

T26A	32126	11-3/4"	1-1/4"	3-3/4 #
------	-------	---------	--------	---------

SWAN NECK BEAD TOOL

For loosening tapered beads. Opposite end for lock rings.

T40	32140	18"	7/8"	3 #
-----	-------	-----	------	-----

SWAN NECK BEAD TOOL

T41	33341	30"	7/8"	5-1/4 #
-----	-------	-----	------	---------

FORCING TOOL FOR 5 DEGREE RIMS

Curved end and tapered end.

T42	33342	30"	7/8"	4-3/4 #
-----	-------	-----	------	---------

BEAD BREAKER-LEVERAGE BAR

Can be used with T95 or T95A.

T50	33350	25"	3/4"	3-1/4 #
-----	-------	-----	------	---------

BEAD BREAKER-LEVERAGE BAR

Loosens truck or tractor beads. Excellent as a leverage bar for T95 or T95A.

T52	34652	31"	7/8"	5-1/4 #
-----	-------	-----	------	---------

TRUCK TIRE CHANGING STAND

Handles wheels or open rims, 16.5"-24". Double slide adjustment with locking device prevents twisting.

T115	36015	—	—	21 #
------	-------	---	---	------

T26B (35926) HEAVY DUTY IMPACT BEAD BREAKER

Loosens the most stubborn beads with floating bead breaking foot and ram bar. Forces wedge foot between head and rim flange. Delivers blow directly to the tip. A very powerful tool. No hammer or other tools necessary. Length: 51". Weight: 25-3/4 Lbs.

PASSENGER TIRE BEAD BREAKERS

BEAD BREAKER IRON SET

Works well on frozen, rusted beads. Flat end used to remount tire. Used in pairs.

T49	32049	18"	11/16"	3-1/2 #
-----	-------	-----	--------	---------

PORTABLE BEAD BREAKER

Fits most conventional rims.

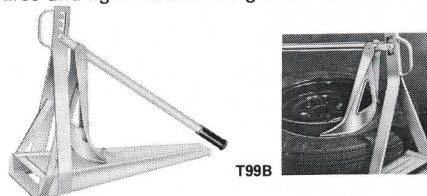
PART NO.	EDP NO.	HANDLE LENGTH	WEIGHT
T100	34670	36"	6-3/4 #

FLOOR TYPE BEAD BREAKERS WON'T MAR OR BEND WHEELS

Ideal for stubborn tires. Use to prevent the bending of wheels. A great solution for custom wheels, foreign wheels without center holes, or wide based motorcycle tires.

T99B (35999) STANDARD MODEL

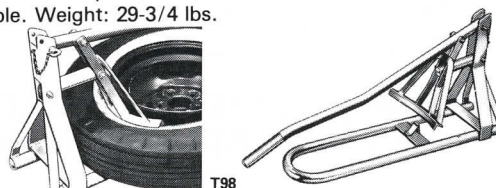
Double strength steel base. Contoured bead breaker shoe. Exclusive 4-position up/down adjustment. Breaks beads on most all size passenger tires and light trucks. Weight: 28-1/2 lbs.



T99B

T98 (35998) DELUXE MODEL

Constructed with high-yield structural steel tubing for greatest strength. Handles tires up to 17". Shoe stabilizer spring prevents slipping. Portable. Weight: 29-3/4 lbs.



T98

SAFETY CAGES

WARNING:

Tire changing can be dangerous, and should be done only by trained personnel using proper tools and equipment as directed by Federal OSHA Standard No. 29 CFR Part 1910.177. Tires may explode during inflation causing injury to operator or bystander. Keep all parts of body outside cage. Use extension hose, clip on chuck and remote valve. See supervisor for safety procedures.

WARNING:

Do not alter cage in any way. Cage must be freestanding and at least three feet from other objects.

DANGER:

Discard cage if bent, cracked, or otherwise damaged.

KEN TOOL SAFETY CAGES

PART NUMBER	EDP NUMBER	DESCRIPTION
T101	36001	2 Bar Safety Cage
T102	36002	4 Bar Safety Cage
T104	36004	3 Bar Safety Cage
T105	36005	5 Bar Safety Cage
T106	36006	3 Bar Safety Cage

SAFETY EQUIPMENT

A safety inflation cage is mandatory in any shop for tubeless and multi-piece rims. Ken-Tool offers a size and design for all your needs. Constructed of heavy gauge steel welded to a steel base. Guards against blown lock rings, exploding rims and ruptured tire explosions when used properly. (See below) These cages meet OSHA safety requirements (29-CFR Part 1910.177).

T105 (36005) 5 BAR SAFETY CAGE

2-1/4" diameter tubing, 41"x22" base plate. One end enclosed by steel strap to prevent tire roll through. Height: 55". Weight: 180 lbs. Inside dimensions: 54"Hx16"W.

T102 (36002) 4 BAR SAFETY CAGE

2-1/4" diameter tubing, 31-1/2"x22" base plate. Rugged construction for full protection. Height: 55". Weight: 134 lbs. Inside dimensions: 54"Hx16"W.

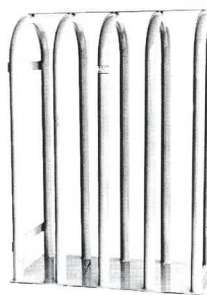
T106 (36006) 3 BAR SAFETY CAGE

Economical 3 bar safety cage that takes a minimum amount of space yet offers full protection from flying lock rings. Same rugged construction as T105. Handles tires 14.00 - 24. Height: 55". Weight: 102 lbs. Inside dimensions: 54"Hx16"W.

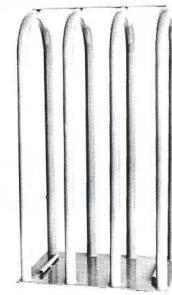
T104 (36004) 3 BAR SAFETY CAGE FOR OFF-THE-ROAD TIRES

Three 2-1/4" diameter bars of high yield tubing welded to a hot rolled base plate. Additional strength added in the form of steel cross bars. Height: 78". Weight: 168 lbs. Inside dimensions: 76"Hx24-1/2"W.

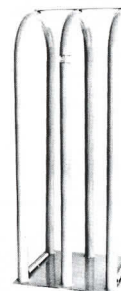
SAFETY CAGES



T105



T102



T106



OFF-THE ROAD
78" HIGH

T104

PORTABLE SAFETY EQUIPMENT

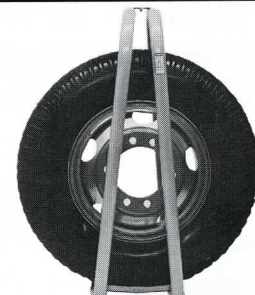
T101 (36001) 2 BAR SAFETY CAGE

2-1/4" diameter tubing. 1/4"x3"x21-1/2" base plate. Handles tire sizes up to and including 12.00-24. Height: 50". Weight: 54 lbs. Inside dimensions: 47"Hx16"W.

PORTABLE SAFETY EQUIPMENT



T101



SERVICE CENTER TOOL BOARDS

T240 (36040) TOOL SET FOR PASSENGER TIRE SERVICE

Contains 11 popular tire changing tools and 27"x34" storage wall board. Weight: 37 lbs.

- 1 each: TG33R Hammer
- TG11B Hammer
- T68 Hub Cap Tool
- T10 Tire Spreader
- T59 Four-Way Wrench
- T6A (2) Tire Irons
- T1X Tire Iron
- T2X Tire Iron
- T15 Brush
- T14 Valve Tool

T250 (36050) TOOL SET FOR TRUCK TIRE SERVICE

Contains 12 popular tire changing tools and 34"x38" storage wall board. Weight: 76 Lbs.

- 1 each: T95 Four-Way Wrench
- TG11D Hammer
- TG35 Hammer
- TR1 Truck Wrench
- T25 Ring Tool
- T23 Ring Tool
- T26A Driving Iron
- TX9 Budd Wrench
- T19 Tire Iron
- T20 Tire Iron
- T45A Tire Iron
- T52 Bead Tool

T242 (36042) BOARD ONLY

Weight: 12-3/4 Lbs.

T254 (36054) BOARD ONLY

Weight: 20-1/2 Lbs.

SERVICE CENTER TOOL BOARDS

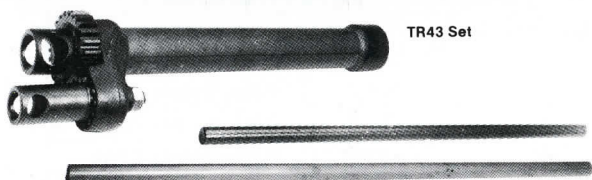


T240

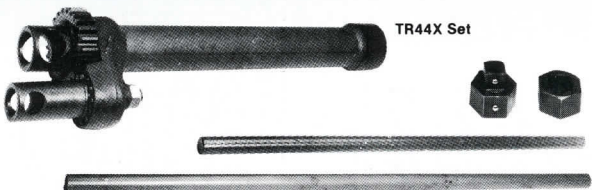


T250

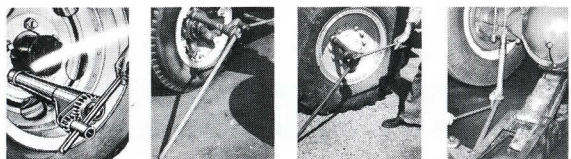
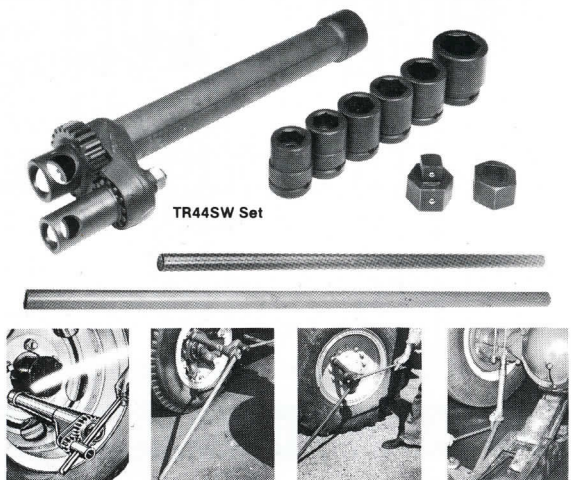
UNIVERSAL POWER WRENCH 3-1 GEAR RATIO - BASIC SET



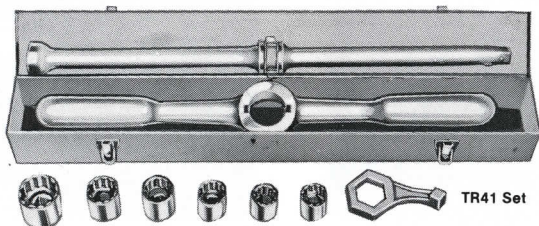
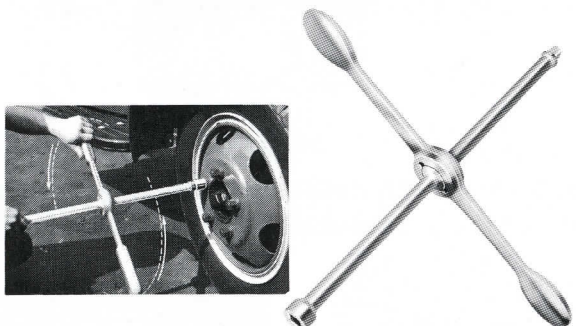
BUDD WHEEL SET



UNIVERSAL SET



IMPACT SHOCK WRENCH SETS



UNIVERSAL POWER WRENCH 3-1 GEAR RATIO

3-1 gear ratio provides the mechanical advantage necessary to remove most any nut. Ideal for on the road services, on the farm, or on recreational vehicles.

TR43 (34543) BASIC SET

Consists of power drive and two handles (solid bar — 20-1/2" long, and tube — 20" long). Weight: 19 lbs.

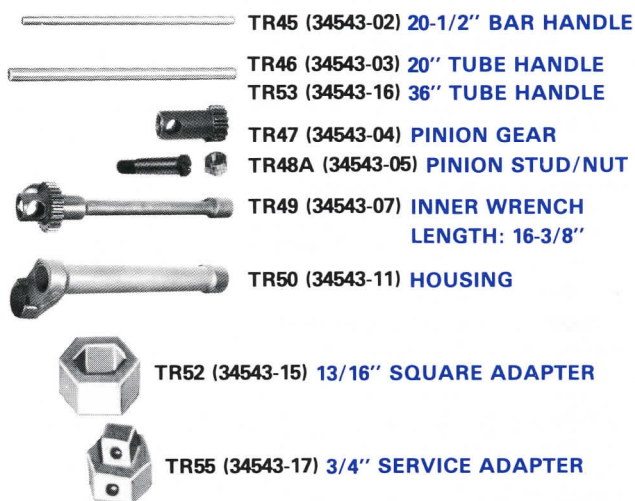
TR44X (34545) BUDD WHEEL SET

Contains power drive, one bar, one tube handle, a 3/4" service adaptor, and one 13/16" square adaptor. Weight: 20 lbs.

TR44SW (34547) UNIVERSAL SET

Consists of power drive, one 20-1/2" bar, one 36" tube handle, a 3/4" service adaptor, a 13/16" square adaptor, and six 3/4" impact sockets (7/8", 15/16", 1-1/16", 1-1/8", 1-3/16", 1-1/2"). Weight: 29 lbs.

COMPONENTS AND ACCESSORIES



IMPACT SHOCK WRENCH SET

Designed to loosen the most stubborn nuts. The handle revolves freely on a shaft through a 120 degree arc, building up a great momentum before it engages the shaft. One end designed to take any 3/4" drive impact socket. Other end has 13/16" square socket.

TR41 (34441) COMPLETE SET

Contains handle, shaft with 13/16" square socket and 3/4" service end, Budd nut wrench, six sockets (7/8", 15/16", 1-1/16", 1-1/8", 1-3/16", 1-1/2") and metal box. Weight: 25-1/4 lbs.

TR42 (34442) BUDD WHEEL SET

Contains handle, shaft, Budd nut wrench, 1-1/2" socket, and metal box. Weight: 23-1/2 lbs.

TR7 (34407) HANDLE ONLY

Length: 24". Weight: 9-3/4 lbs.

TR8 (34408) SHAFT ONLY

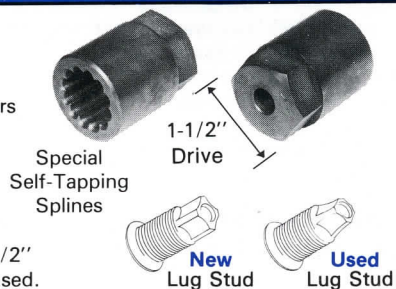
Length: 25-1/2". Weight: 6-3/4 lbs.

NEW DUAL WHEEL LUG STUD REMOVER

NO. 30165

- Quickly and easily removes stripped dual wheel studs.
- No need to weld on crossbars or use cutting torches.
- Special self-tapping splines provide maximum grip to remove stripped lug studs.

Use With Ken-Tool TR1 or TR98 Truck Wrenches. A 1-1/2" Impact Socket may also be used.



TIRE SPREADERS

T10 (31510) TIRE SPREADER

Adjustable rotating rollers make inside tire casing inspections fast and easy. Weight: 2-1/2 lbs.

T53 (31553) PASSENGER TIRE SPREADER

Simple, fast operation. Locks both beads open for easy tire inspection and repairs. Use 2 for a portable section repair spreader. Weight: 3 lbs.

T54 (31554) TRUCK TIRE SPREADER

For large truck tires use in pairs. Spreads tires up to 17" span. Spreading power of a car jack. Heavy duty construction. Weight: 7-1/4 lbs.

PNEUMATIC TIRE BUFFERS

31237 AIR BUFFER

Lightweight and compact. Operates at 10,000 RPM on 125 lbs. air. 1/4" I.P.S. for quick coupler fitting. Complete with buffing wheel. Weight: 1-1/4 lbs.

T135B (30435) METAL BUFFER WHEEL. Weight: 2 oz.

31237-99 REPAIR KIT For above buffer. Weight: 8 oz.

TIRE VALVE SERVICE TOOLS

T14 (30214) VALVE STEM PULLER

For installing and remounting snap-in rubber valves on tubeless tires. Weight: 11 oz.

T16 (30216) TIRE VALVE REPAIR TOOL

Combination tool and wrench for cleaning valve threads and replacing or inserting valve cores. Weight: 1 oz.

T16E (30218) FOUR-WAY VALVE REPAIR TOOL

Valve core remover, tire deflator, and valve stem rethreader for inside and outside threads. Weight: 1 oz.

T16D (30217) VALVE STEM RETRIEVER

For pulling and holding valve stem through rim while inflating tire. Weight: 1 oz.

WHEEL COVER PULLER REPLACERS

T67 (31567) PROFESSIONAL WHEEL COVER PULLER/REPLACER

Heavy duty construction for rugged use. Removes wheel covers quickly and easily. Rubber head prevents damage to the wheel cover. Heavy duty handle. Great for cars, vans, and trucks. Weight: 1-3/4 lbs. Stock size 9/16". Length 17-1/2". Replaceable rubber head.

T68 (31568) WHEEL COVER PULLER/REPLACER

Rubber head prevents damage to hub cap. Designed to remove most all hub caps including compact and foreign cars. Replaceable rubber head (T11RH). Weight: 1-1/4 lbs. Stock size 7/16". Length 15".

B260



WHEEL BALANCER

B260 (31360)

"CHALLENGER" WHEEL BALANCER

Portable and self leveling. Built in weight trap. Weight: 15 lbs.

B261 (31360-01) BALANCE HEAD ONLY

B262 (31360-99) BUBBLE DEVICE ONLY

NEW

EMERGENCY WHEEL LOCK REMOVER

Several styles of wheel locks are designed to prevent unauthorized removal of the vehicle's wheels. Unfortunately if the lock key is misplaced, lost or broken, a replacement key may take days or weeks to replace.

If the vehicle requires a wheel to be removed for such reasons as a flat tire, brake work, etc., a great deal of time and effort may be spent removing the wheel lock. This may entail damaging the lock, lug and possibly the wheel.

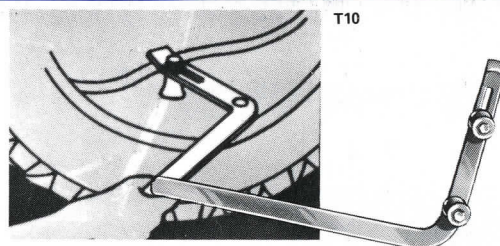
The 30160 eliminates those problems by placing the tapered socket over the wheel lock and removing, as detailed in the instruction sheet enclosed with each tool.

NO. 30160

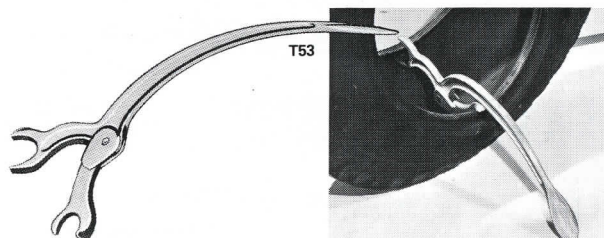


Special
Tapered Mouth
1/2" Drive

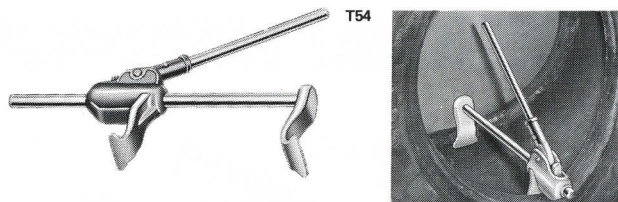
TIRE SPREADERS



T10



T53



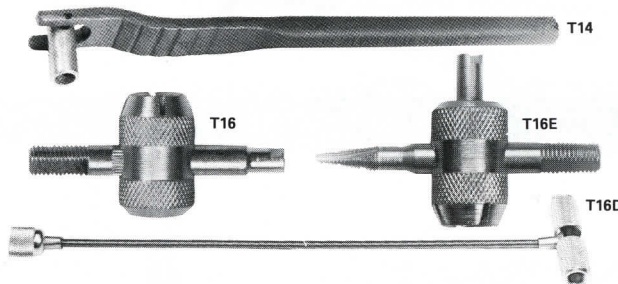
T54

PNEUMATIC TIRE BUFFERS



31237

TIRE VALVE SERVICE TOOLS



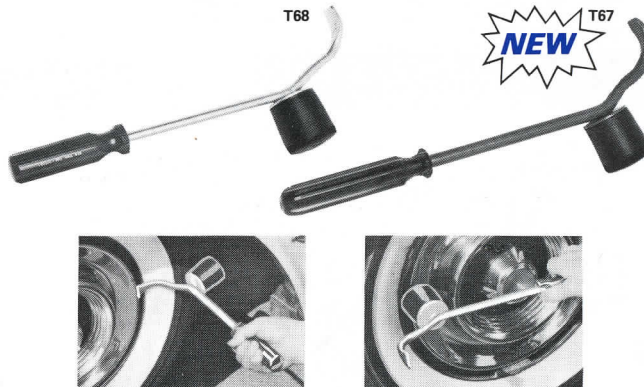
T14

T16

T16E

T16D

WHEEL COVER PULLER/REPLACERS



T68

NEW T67

PITMAN ARM PULLER



B37

SHOCK LINK SPREADER



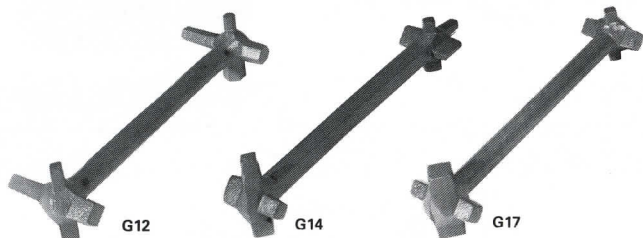
B38

TIE ROD SPREADER



B39

DRAIN PLUG WRENCH



G12

G14

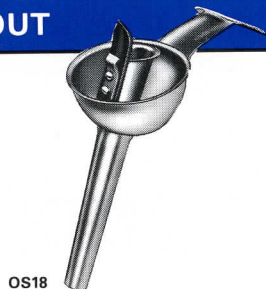
G17

UNIVERSAL CHAIN WRENCH



G39

LUBE SPOUT



OS18

AXLE STAND



T123

GENERAL PURPOSE TOOLS AND EQUIPMENT

B37 (32037) PITMAN ARM PULLER/BALL JOINT SEPARATOR

Wedge design eliminates damage to steering assemblies. Fork Opening: 1-1/8". Length: 10". Stock: 7/8". Weight: 2 lbs.

B38 (32038) SHOCK LINK SPREADER

For shock links and tie rod points. Fork opening of 9/16" permits straddling bolts. Length: 16". Stock: 3/4". Weight: 2 lbs.

B39 (32039) TIE ROD SPREADER

For cars, light trucks. Fork Opening: 5/8". Length: 16". Stock: 3/4". Weight: 2-1/4 lbs.

G12 (30312) DRAIN PLUG WRENCH

For servicing both cars and trucks. Hex lug sizes: 9/16", 1/2", 3/8", 5/16". Square plug sizes: 3/8", 5/16", 1/2", 7/16". Round shaft: 8-1/4" long. Weight: 1 lb.

G14 (30314) 10 LUG DRAIN PLUG WRENCH

Removes most drain plugs. Square shaft. 8-1/2" long. Weight: 13 oz.

G17 (30317) 8 LUG DRAIN PLUG WRENCH

Six square plug sizes set at cross corners (5/16", 3/8", 7/16", 1/2", 9/16", 5/8"). Round shaft: 8-1/4" long. Weight: 1 lb.

G39 (31039) UNIVERSAL CHAIN WRENCH

Capacity: 1/8" to 4". Handle: 10". Weight: 1-3/4 lbs.

OS18 (31118) LUBE SPOUT

Ideal for pouring oil, anti-freeze, etc. Cutting blade for 1 or 5 quart U.S. cans. Prevents spilling. Length: 10". Weight: 12 oz.

AXLE STAND

T123 (36023) 1-1/2 TON HI-BOY STAND

A high axle stand for all around service center use. Ideal when changing shock absorbers, ball joints, and general under-the-car services. Wide, non-slip saddle. Built-in tool and parts tray. Height span from 64" to 72". Capacity rating per stand: 3000 lbs. Sold individually. Recommend using in pairs. Shipping weight: 30 lbs.

NEW

TIRE REAMER SPEED RASPS

THE TIRE REPAIRMAN'S MOST USEFUL TOOL WHEN REPAIRING TIRES.

- Four popular sizes for repairing Passenger, Truck, and OTR Tires.
- Ideal for Steel Belted Radial and Belted Bias Tires.
- Specially tempered steel blades for Long Service.
- Form-fit handle for Easy-grip, no-slip power.
- "Auger Point" helps clean injury area.
- Cuts repair time in half and economically priced.

DIAMETER	PART NO.	OVERALL LENGTH	BLADE LENGTH
5/32"	30190	7"	3-5/8"
3/16"	30191	10-1/2"	6-3/4"
1/4"	30192	14-1/2"	9-11/16"
5/16"	30193	17"	12-7/8"

30190



30191



30192



30193



RADIAL TRUCK TIRE BEAD SEATER

One piece tube slips over rim and allows easy inflation.

31437 fits 16-1/2" - 17-1/2" rims.

31438 fits 19-1/2" rims.

31439 fits 22-1/2" - 24-1/2" rims.

PNEUMATIC BEAD EXPANDERS

T132 (31432) BEAD EXPANDER

Tested and approved for bias ply and belted bias tires. Tough nylon cover and neoprene inner tube. 2-1/4" diameter. Fits most all sized passenger tires. 70 p.s.i. safety release valve. Weight: 2-3/4 lbs.

T133 (31433) STANDARD SIZE BEAD EXPANDER

Similar to above. Pliable neoprene rubber tube encased in nylon cover. Contracts as air is applied. 3/4" diameter. Weight: 10 oz.

MECHANICAL BEAD EXPANDER

T130 (31430) MECHANICAL BEAD EXPANDER

Handles tires up to 9.15 x 15. Serrated bar prevents slipping. Jack action. Adjustable band. One per carton. Shipping Weight: 9-3/4 lbs.

T130A (31430-99) Complete Repair Kit

T130-9 (31430-09) Curved Ratchet Bar

T130-C (31430-50) Riveted Band

T130-D (31430-60) Body Assembly with handle

TIRE LUBRICANT

T147A (35847) BEAD-EZE

An excellent tire mounting lubricant. Provides the lubrication necessary for proper mounting. Dries quickly to prevent wheel slippage. Also dilutes to form an excellent air leak detector. 1 gallon containers. Weight: 9 lbs.

AIR LEAK LOCATOR

D105A (35805) DETECTO MIST

Concentrated formula dilutes with water and locates the slightest air leaks when applied to an inflated tire. Ends messy dunking. One quart size. Weight: 2-1/2 lbs.

BRUSHES

B111 (30511) BEAD LUBRICANT APPLICATOR

Length: 10". Weight: 3 oz.

T15 (30515) HAND WIRE BRUSH

Good for cleaning rims, removing rust from tire beads. Carbon steel wire bristles. Length: 14". Weight: 5 oz.

Ken-Tool®

**WE MAKE TOOLS,
BUT WE SELL SATISFACTION**

**WHENEVER CHANGING TIRES
WE RECOMMEND YOU ALWAYS
FOLLOW MANUFACTURER'S
SUGGESTED PROCEDURES.**

RADIAL TRUCK TIRE BEAD SEATER



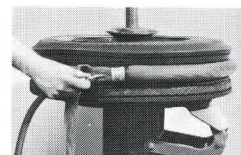
31437
31438
31439



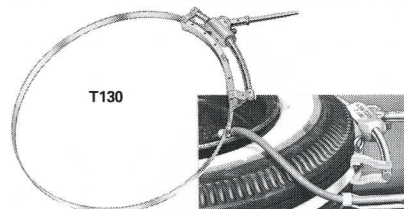
PNEUMATIC BEAD EXPANDERS



T132
T133



MECHANICAL BEAD EXPANDER



T130

TIRE LUBRICANT



T147A

AIR LEAK LOCATOR

D105A



BEAD LUBRICANT APPLICATOR



B111

HAND WIRE BRUSH



T15

Everything You Want In Your MacPHERSON STRUT SERVICE TOOLS

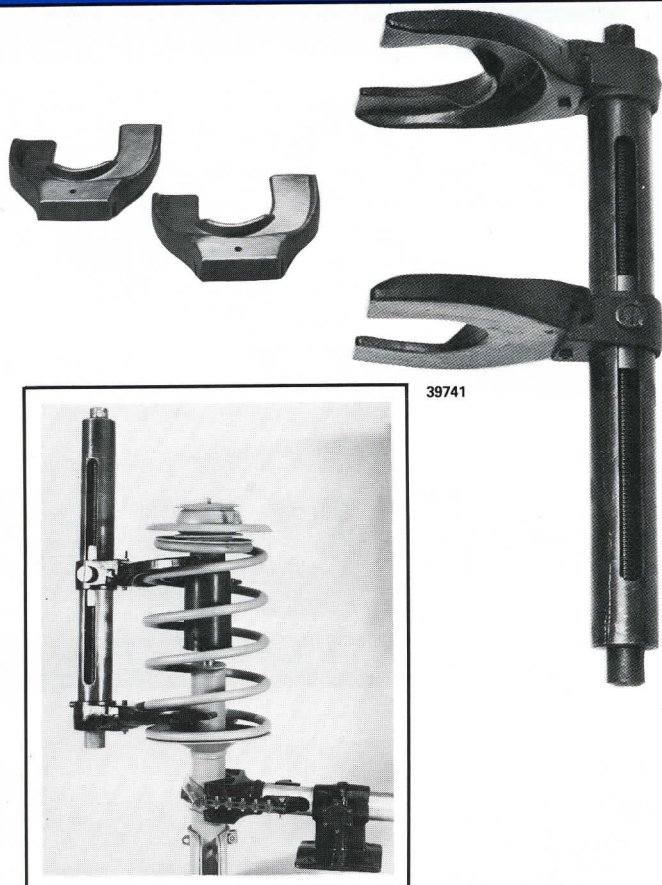
Developed after more than two years of research into the requirements of automotive service shops and detailed studies of available equipment. Ken-Tool's strut repair/replacement tools — a superior spring compressor and a versatile strut vise — combine:

- **ECONOMY** — These tools will pay for themselves with just 4 jobs!
- **FAST AND EASY TO USE** — They'll give a healthy boost to your flat rate profit margin.
- **SAFE** — Powerful springs won't accidentally fly off and cause injury and damage.
- **RUGGED CONSTRUCTION** — Ken-Tool strut tools are built to give you a long, trouble-free service life.

Truly, these are a whole new generation of strut service tools!

WE MAKE TOOLS, BUT WE SELL SATISFACTION

STRUT SPRING COMPRESSOR



NEW

MacPHERSON STRUT SPRING COMPRESSOR

NO. 39741

This versatile unit can be used with any MacPherson strut assembly you will encounter, *foreign or domestic. Check these quality features:

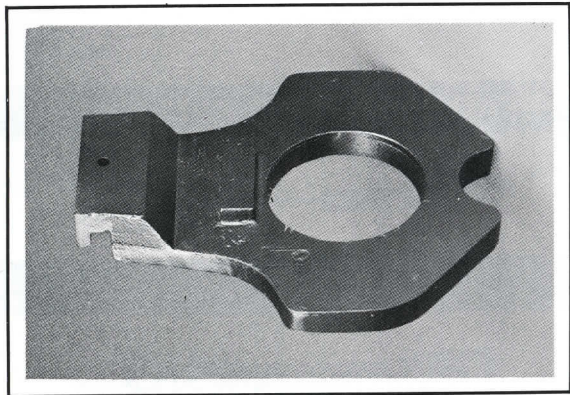
- Comes with 2 sets of interchangeable jaws to fit most any spring, enclose a full 220° of the spring.
- Can be used with impact wrench or ratchet.
- Sleeve is made of the same alloy steel used in crankshafts, heat treated to 53 on the Rockwell C scale.
- Drive spindle is 1" Acme threaded chrome moly 4140 steel, hardened to 41 on the Rockwell C scale.
- Spindle seats on two thrust bearings.
- Roller bearings at each end of spindle allow fingertip adjustments and permit use of a ratchet or impact wrench to fully compress spring.
- Spring jaws which encapsulate spring are made of hot drop forged, high grade steel.
- Six and one-half degree helical angle assures a secure seat for the spring.
- Full 15" stroke provides maximum versatility, lets you compress the largest spring on the market.
- Works on or off the car.
- Maintenance is simple. Just clean spindle and nut at regular intervals. Lubricate periodically with lithium lubricant or moly grease.
- Complete with durable storage case.

* C-car adapter part No. 39742 available separately. (See below).

WARNING: Any person who fabricates or installs spring components or spring assemblies does so at his own risk. It is recommended that any such fabrication or installation be done strictly in accordance with specifications and instructions provided by the original equipment supplier. Ken-Tool is not liable for any loss or damage arising out of or in connection with improperly fabricated or installed spring components and assemblies.

These strut tools are not designed to work on conventional springs. We recommend using them for work on MacPherson Struts only.

C-CAR ADAPTER



NEW

C-CAR ADAPTER

(For use on General Motors "C-car" models)

NO. 39742

Due to the very large size of the coil spring found on the General Motors c-car model strut assemblies, it is necessary to use the #39742 c-car adapter when replacing or repairing these struts. The c-car adapter fits into either jaw clamp on the front face of the 39741 spring compressor. When properly placed, the adapter fits securely on top of the upper mounting platform of the c-car strut assembly. All mounting screws and piston nuts are readily accessible due to the unique shape of our c-car adapter. Because of the conical shape of the c-car coil spring, the adapter should be mounted on the upper platform, using one of the large jaws on the bottom mounting platform. When mounting the compressor onto the coil spring, be sure the large jaw is mounted on the lowest coil available on the c-car assembly. This adapter makes repair/replacement of c-car struts easy, safe, and efficient — with no need to grasp the large upper coil on any c-car.

- Hot drop-forged steel construction.
- Center hole allows access to piston nut.
- When properly mounted, fits securely and eliminates movement.
- Weighs 6 pounds.

NEW STRUT VISE/CHAIN WRENCH/ RACK & PINION VISE

NO. 39743

This patented vise is a whole new concept in strut tool design. Its unique chain lock feature pulls equally from both sides during tightening, eliminating the danger of crushing or damaging the tube. It holds struts so securely that they will not rotate, even when working on the most difficult strut nuts. (This versatile tool can also be used as a vise for rack and pinion steering mechanisms and, when removed from its mount, as a chain wrench.)

Ken-Tool's strut vise can be used either with or without bench mounting. It locks securely in eight different positions: 0°, 45°, 90°, 135°, 180°, 225°, 270° or 315°.

Extremely durable, Ken-Tool's strut vise features a 12" long shaft and Acme threaded spindle of 1040 steel having a Rockwell 35 C scale hardness. The chain is heat treated, 1" pin size. Both drive nut and steel jaw are hardened 1040 steel.

Weighs less than 13 pounds.

STRUT VISE/CHAIN WRENCH/ RACK & PINION VISE



39743

• PROFESSIONAL • TOP QUALITY

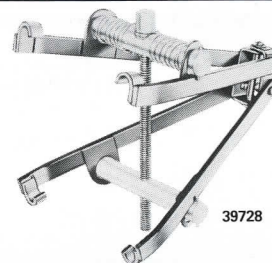
• FAST AND SAFE STRUT SERVICE

NEW SINGLE DRIVE MacPHERSON STRUT SPRING COMPRESSOR

NO. 39728

- Universal application — 100% coverage; including General Motors X cars, and Chrysler K cars.
- Fast and effortless — uses power from ordinary impact wrench.
- Strong enough to handle even the toughest springs.
- Lightweight, portable.

SINGLE DRIVE STRUT SPRING COMPRESSOR



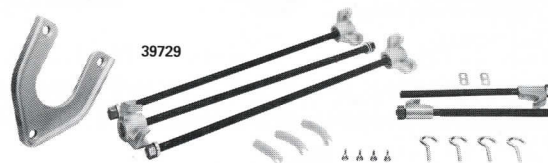
39728

NEW UNIVERSAL MacPHERSON STRUT COIL SPRING TOOL KIT

NO. 39729

- A complete kit — services conventional MacPherson struts, and General Motors "A", "J" and "X" body cars!
- This tool can do the job of three separate strut tools.
- Kit includes spring protectors, safety kit, and full instructions.

UNIVERSAL STRUT COIL SPRING TOOL KIT



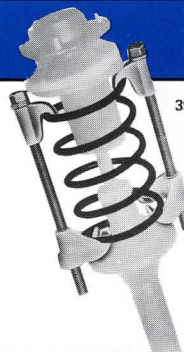
39729

NEW MacPHERSON STRUT COIL SPRING COMPRESSOR

NO. 39730

- Works on most all MacPherson strut assemblies.
- For MacPherson strut spring set replacements.
- For bent strut or strut tube; and damaged spindles.
- Can be used with impact wrench or hand tool.
- Use ON or OFF the car.

STRUT COIL SPRING COMPRESSOR



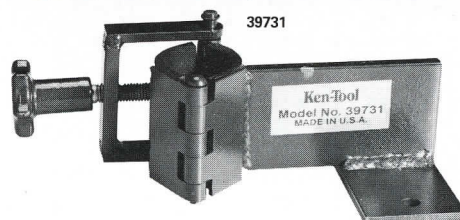
39730

NEW MacPHERSON STRUT VISE

NO. 39731

- Grips strut assemblies without crushing or damaging the tube.
- Universal application.
- Easily mounts to any work bench.

STRUT VISE



39731

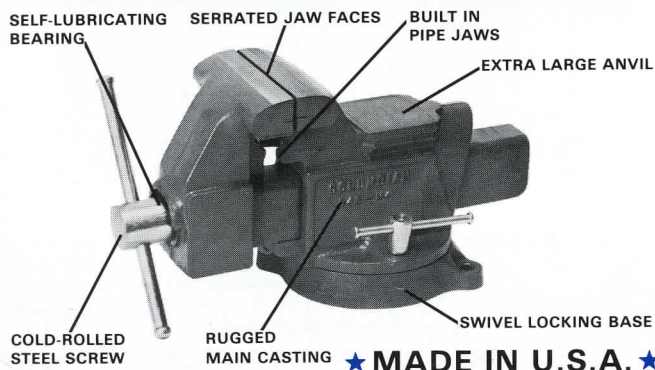
COLUMBIAN®

QUALITY VISES MACHINISTS' VISES

Since 1901, Columbian vises have been manufactured to stand up to the toughest use imaginable. Made of superior materials, they're unrivaled for strength and dependability. And your customers know Columbian means quality. That's why Columbian vises are so easy to sell. Keep your customers happy . . . with Columbian.

COLUMBIAN QUALITY VISES

PROFESSIONAL SHOP VISES



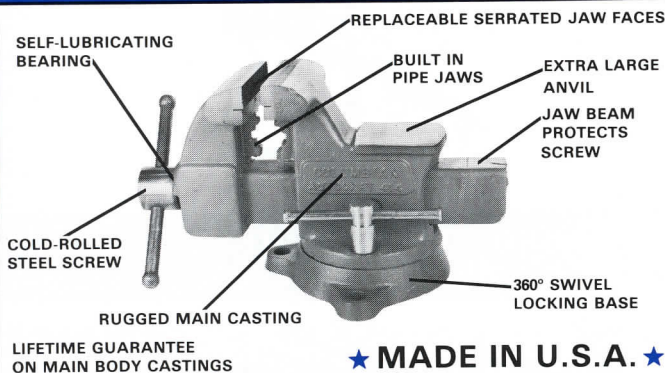
PROFESSIONAL SHOP VISES

One of the most popular Vises in the industry. Superior quality and workmanship make the D series one of the best values on the market today.

Features and benefits:

- Heavy-duty channel steel front jaw beam covers screw.
- Extra large back jaw anvil and anvil horn.
- Cold-rolled steel screw.
- Forged steel handle.
- Replaceable Ductile Iron nut, Acme threaded.
- Replaceable heat-treated steel jaw faces.
- Permanent pipe jaws, positive "Tri-Grip" design.
- Positive locking swivel base, slip handle lock nut.
- Polished jaws and anvil.
- Screw handle and lock nut, bright zinc plated.

PROFESSIONAL AUTOMOTIVE VISES



VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	PIPE JAW CAPACITY	WEIGHT
D43-1/2	36443	3-1/2"	4"	1/8"-1-1/4"	16 #
D44	36444	4"	5"	1/8"-2"	27 #
D45	36445	5"	6"	1/8"-2-1/2"	38 #
D46	36446	6"	6"	3/8"-2-3/4"	60 #

Individual Cartons. D43-1/2 Packed 5 Per Case.
D44, D45 & D46 Packed 1 Per Case.

MADE IN U.S.A.

PROFESSIONAL AUTOMOTIVE VISES

Features and benefits:

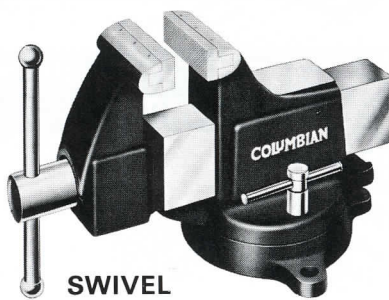
- Replaceable hardened tool steel jaw faces.
- Self-lubricating graphite bronze bearing.
- Forged steel handle.
- Large ground and polished anvil.
- Cold-rolled steel screw.
- Ductile Iron base swivels full 360°.
- Front jaw beam covers and protects screw.
- Permanent sure-grip pipe jaws.

VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	PIPE JAW CAPACITY	WEIGHT
414	36414	4"	5"	1/8"-2"	28 #
415	36415	5"	6"	1/8"-2-1/2"	36 #

Individual Cartons.

MADE IN U.S.A.

COLUMBIAN MACHINIST VISES



COLUMBIAN MACHINIST VISES

MACHINISTS' VISES

Features and benefits:

- Ductile Iron castings.
- Steel handle balls forged from handle stock.
- Self-lubricating graphite bronze bearing.
- Replaceable hardened tool steel flat jaw faces, securely fastened with drive pins, no holes in gripping face.
- All sizes, except 6" and 8" have ground and polished anvil.
- Lifetime guarantee on main body castings.

SWIVEL BASE

America's most popular machinists' vise. • Swivels full 360°
• Geared bolt and base plate afford positive lock against slippage.

STATIONARY BASE

VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	THROAT DEPTH	WEIGHT
603M3	36730	3"	4"	3"	25 #
603-1/2M3	36735	3-1/2"	5"	3-1/4"	35 #
604M3	36740	4"	6"	3-5/8"	43 #
604-1/2M3	36745	4-1/2"	7"	4-1/8"	57 #
605M3	36750	5"	8"	4-1/4"	70 #
606M3	36760	6"	10"	4-3/8"	107 #
608M3	36780	8"	12"	6"	184 #

One Per Carton

MADE IN U.S.A.

VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	THROAT DEPTH	WEIGHT
503M3	36630	3"	4"	3"	21 #
503-1/2M3	36635	3-1/2"	5"	3-1/4"	30 #
504M3	36640	4"	6"	3-5/8"	38 #
504-1/2M3	36645	4-1/2"	7"	4-1/8"	49 #
505M3	36650	5"	8"	4-1/4"	60 #
506M3	36660	6"	10"	4-3/8"	92 #
508M3	36680	8"	12"	6"	160 #

One Per Carton.

MADE IN U.S.A.

COLUMBIAN MACHINIST VISES

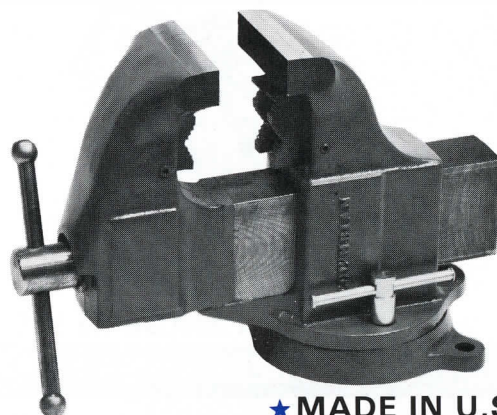
COMBINATION PIPE SWIVEL BASE VISES

Features and benefits:

- Heat treated steel pipe jaws to insure hardness and strength.
- Pipe jaws are interchangeable; Each has 2 working faces.
- Special pipe jaws design makes possible holding pipe down to 1/8".
- Pipe jaws do not protrude beyond jaw faces.
- Ductile Iron castings.
- Steel handle balls forged from handle stock.
- Self-lubricating graphite bronze bearing.
- Lifetime Guarantee on main body castings.

VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	THROAT DEPTH	PIPE JAW CAPACITY	WEIGHT
203-1/2M2	36835	3-1/2"	4"	4"	1/8"-2-1/2"	38 #
204-1/2M2	36845	4-1/2"	5"	5-3/8"	1/8"-3-1/2"	61 #
205M2	36850	5"	6"	6-1/4"	1/8"-4-1/2"	95 #
206M2	36860	6"	10"	7-1/8"	1/8"-6"	162 #
One Per Carton.				MADE IN U.S.A.		

COMBINATION PIPE SWIVEL BASE VISES



★ MADE IN U.S.A. ★

COLUMBIAN II VISES FOR THE DIY MARKET

LIGHT DUTY HOMESHOP VISES

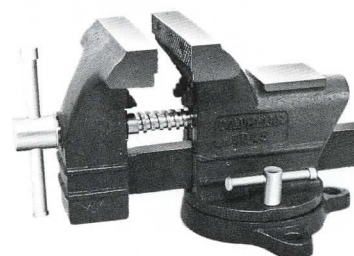
An outstanding value. Sturdy, reliable and inexpensive.

Features and benefits:

- Cast iron body.
- Solid steel beam.
- Replaceable jaw faces.
- 180° swivel base.
- Built-in pipe jaws.
- Cold forged steel screw.
- Integral anvil and anvil horn.
- Zinc plated screw handles and lock nut.
- Not designed for professional service.

VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	PIPE JAW CAPACITY	WEIGHT
1035	36935	3.5"	4"	1/8"-1-1/4"	9 #
1045	36945	4.5"	5"	1/8"-1-1/4"	13.5 #
1035 Packed 6 Per Case; 1045 Packed 4 Per Case.				IMPORTED	

LIGHT DUTY HOME SHOP VISES



HEAVY-DUTY BENCH VISES

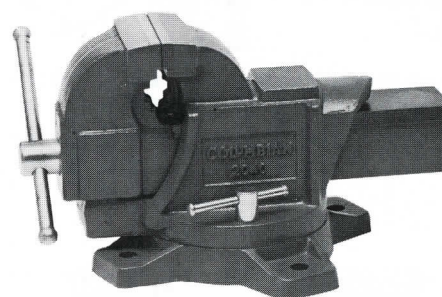
The right choice for bigger jobs. Engineered for longer service life.

Features and benefits:

- Cast iron body reinforced at major stress areas.
- Main screw protected by cast channel beam construction.
- Replaceable hardened steel jaw faces.
- 180° swivel base with positive lock.
- Built in pipe jaws.
- Cold forged steel screw.
- Polished anvil horn.
- Zinc plated screw handles and lock nut.
- Not designed for professional service.

VISE NO.	EDP NO.	JAW WIDTH	JAW OPENING	PIPE JAW CAPACITY	WEIGHT
2040	36940	4"	4"	1/2"-1-1/4"	30 #
2050	36950	5"	5"	1/2"-2-1/2"	37.5 #
2060	36960	6"	6"	1/2"-2-1/2"	46 #
2040 Packed 2 Per Case; 2050, 2060, Packed 1 Per Case.				IMPORTED	

HEAVY-DUTY BENCH VISES



COLUMBIAN SPECIALTY VISES

CLAMP VISE

Ideal for home, shop or service man. Fits bench, table or block up to 2-1/4" thick.

Features and benefits:

- Fully-machined jaws.
- V groove jaws for holding rounds.
- Accurately threaded steel screw located below guide rods so work resting on rods cannot touch screw.
- Smooth faces.
- Handy anvil.
- Not designed for professional service.

VISE NO.	EDP NO.	JAW WIDTH	JAW DEPTH	JAW OPENING	WEIGHT
235	36401	3"	1-1/2"	2-3/8"	3.5 #
Individual Cartons. 6 Cartons Per Case.					

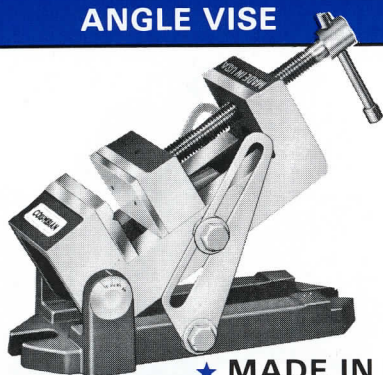
CLAMP VISE



COLUMBIAN[®] VISE ACCESSORIES / C-CLAMPS

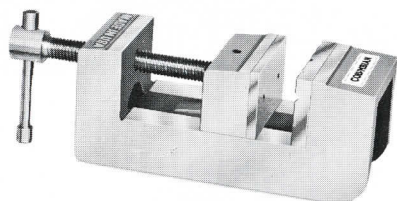
COLUMBIAN SPECIALTY VISES

ANGLE VISE



★ MADE IN U.S.A. ★

DRILL PRESS VISE



★ MADE IN U.S.A. ★

ANGLE VISE

For drill press, milling machine, grinder and bench work. Quick, accurate setups without clamps or wedges.

Features and benefits:

- Adjusts to any angle 0° to 90°.
- Can be used as an ordinary vise when horizontal.
- Accurately graduated for all angles.
- Grooved steel jaw for holding round or tapered pieces.
- Steel, adjustable support screws.
- Over-all length, 9 inches.

VISE NO.	EDP NO.	JAW WIDTH	JAW DEPTH	JAW OPENING	SCREW DIA.	WEIGHT
225	36303	2-1/2"	1-1/2"	2-1/2"	1/2"	8 #

One Per Carton.

MADE IN U.S.A.

DRILL PRESS VISE

Efficient, multi-purpose vise for general work including drilling, tapping, and grinding.

Features and benefits:

- Can be used on end, either side or horizontal position.
- Precision-squared sides.
- Body and moving jaw are high tensile cast iron.
- Precision-cut threaded steel lead screw.
- Grooved steel jaw for holding round or tapered pieces.
- Overall length 7-1/4 inches.

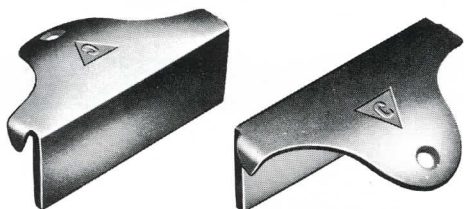
VISE NO.	EDP NO.	JAW WIDTH	JAW DEPTH	JAW OPENING	SCREW DIA.	WEIGHT
125	36301	2-1/2"	1-1/2"	2-1/2"	1/2"	4.5 #

One Per Carton.

MADE IN U.S.A.

COLUMBIAN VISE ACCESSORIES

COPPER JAW CAPS

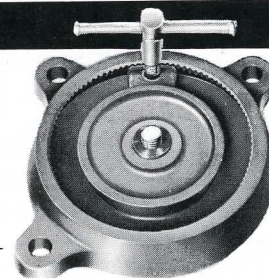


Fits snugly over jaws and cover knurled steel faces to prevent marring of soft materials. Easily installed and removed.

PART NO.	JAW WIDTH	PART NO.	JAW WIDTH
14401	3"	14404	4-1/2"
14402	3-1/2"	14405	5"
14403	4"	14406	6"

SWIVEL BASE KITS

Columbian stationary base Machinists' Vises are easily converted to Swivel Base Vises by the addition of the Columbian Swivel Kit. Swivel can be installed in 2 minutes. Danger of slipping is completely eliminated by forged steel, tapered-gear lock bolt. Kit may also be used as a replacement base for any vise in the Machinists' Vise Series.



KIT INCLUDES:

- Swivel Base
- Lock Nut
- Lock Bolt
- Center Bolt
- Washer
- Bushing And Plug Cap

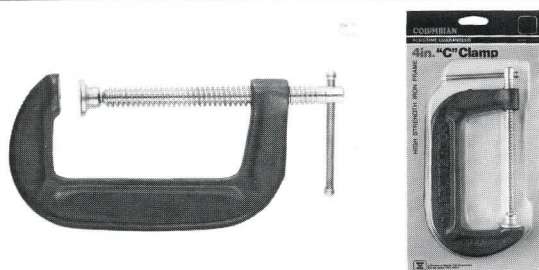
KIT NO.	EDP NO.	FITS VISE NO.	WEIGHT
563	36530	503M3	4 #
563-1/2	36535	503-1/2M3	5 #
564	36540	504M3-504-1/2M3	5 #
565	36550	505M3	10 #
566	36560	506M3	15 #
568	36580	508M3	24 #

One Per Carton.

COLUMBIAN C-CLAMPS

High strength Ductile Iron frame with durable enamel finish. Bright zinc plated steel screw and handle assures easy operation for years to come. All Columbian C-Clamps carry our exclusive lifetime guarantee. If they ever fail to give satisfactory performance, return for replacement.

DUCTILE IRON C-CLAMPS



DUCTILE IRON C-CLAMPS

PART NO. CARDED	JAW OPENING	DEPTH	WEIGHT
38015	1"	1-1/8"	.16 #
38017	2"	1-1/8"	.24 #
38019	3"	1-7/8"	1 #
38020	4"	2-1/16"	1.5 #
38021	5"	2-1/2"	2.5 #
38022	6"	2-3/4"	2.8 #

4", 5", 6" Standard Pack - 5 Per Carton.
1", 2", 3" Standard Pack - 10 Per Carton.

COLUMBIAN C-CLAMPS

DEEP REACH DUCTILE IRON C-CLAMPS

PART NO. CARDED	JAW OPENING	DEPTH	WEIGHT
38045	1-1/2"	1-1/2"	.24 #
38049	2-1/2"	2-1/2"	1 #
38053	3-1/2"	3-1/2"	1.5 #
38054	4-1/2"	4-1/2"	2.5 #

1-1/2", 2-1/2" Standard Pack—10 Per Carton.
3-1/2", 4-1/2" Standard Pack—5 Per Carton.

DEEP REACH DUCTILE IRON C-CLAMPS



**COLUMBIAN
C-CLAMP ASSORTMENTS**

38028 CARDED C-CLAMP ASSORTMENT

5 ea.—1", 2", 3". 4 ea.—4", 5", 6".

Space requirements: 34"Wx16"H. Weight: 17.5 Lbs.

38027 CARDED C-CLAMP ASSORTMENT

10 ea.—1", 2", 3". 5 ea.—4", 5", 6".

Space requirements: 34"Wx16"H. Weight: 31.5 Lbs.

*Both assortments include: FREE peg-board planogram with hooks.

ADDITIONAL ASSORTMENTS AVAILABLE

**COLUMBIAN
DEEP REACH C-CLAMP ASSORTMENTS**

38058 DEEP REACH CARDED C-CLAMP ASSORTMENTS

10 ea.—1-1/2", 2-1/2". 5 ea.—3-1/2", 4-1/2".

Space requirements: 27"Wx14"H. Weight: 33 Lbs.

Includes FREE peg-board planogram with hooks.

HARGRAVE PREMIUM LINE C-CLAMPS

FORGED STEEL SUPERCLAMP NO. 44

Drop forged frame is high strength heat treated steel. Handle is sliding pin (vise-type). Large diameter screws run full length in all sizes, and are specially treated to prevent bending and damage to threads.

PART NO.	EDP NO.	JAW OPENING	DEPTH*	SCREW DIAMETER	TEST LOAD POUNDS	WEIGHT
44-1	39401	**1"	1"	3/8"	1,800	1.5 # Per Box
44-1-1/2	39400	**1-1/2"	1-3/8"	3/8"	2,000	3 # Per Box
44-2	39402	**2"	1-3/4"	1/2"	2,700	6 # Per Box
44-3	39403	**3"	2-1/4"	1/2"	3,000	9 # Per Box
44-4	39404	**4"	2-1/2"	5/8"	3,700	13.5 # Per Box
44-6	39406	**6"	3-1/8"	5/8"	4,500	21 # Per Box
44-8	39408	8"	3-3/4"	3/4"	5,200	5.75 # Each
44-10	39410	10"	4"	7/8"	6,600	7.8 # Each
44-12	39412	12"	4-1/4"	7/8"	8,000	9.5 # Each

*Depth From Center Of Screw To Frame.

**Standard Pack—6 Per Box — Other Sizes In Bulk.

**DEEP GENERAL PURPOSE BODY CLAMP
NO. 400**

Steel frame, drop forged and heat treated for maximum strength. Specially treated screw prevents bending and battering of threads.

PART NO.	EDP NO.	MAX. OPEN-ING	MIN. OPEN-ING	DEPTH*	SCREW DIA-METER	TEST LOAD LBS.	WEIGHT
400-2	39502	2"	0"	2"	1/2"	3,300	1 #
400-3	39503	3"	0"	2-3/8"	1/2"	3,500	1.5 #
400-4	39504	4"	0"	2-3/4"	5/8"	4,100	2.1 #
400-6	39506	6"	0"	3-5/8"	3/4"	5,400	4.1 #
400-8	39508	8"	2"	4-1/2"	7/8"	5,900	6 #
400-10	39510	10"	3"	5-3/8"	7/8"	6,200	8.75 #
400-12	39512	12"	4"	5-3/4"	7/8"	9,300	11 #

*Depth From Center Of Screw To Frame.

One Per Box

PREMIUM LINE C-CLAMPS



STANDARD CARRIAGE CLAMP NO. 540

Frames made from Ductile Iron for greatest strength.

PART NO.	EDP NO.	JAW OPENING	DEPTH*	SCREW DIAMETER	TEST LOAD POUNDS	WEIGHT
540-2-1/2	39602	2-1/2"	1-3/4"	1/2"	1,100	.9 #
540-3	39603	3"	1-7/8"	1/2"	1,800	1 #
540-4	39604	4"	2-1/16"	5/8"	2,150	1.8 #
540-5	39605	5"	2-1/2"	5/8"	2,250	2.3 #
540-6	39606	6"	2-3/4"	5/8"	2,450	2.8 #
540-8	39608	8"	3-1/4"	3/4"	2,750	4 #
540-10	39610	10"	3-5/8"	7/8"	2,250	7.25 #
540-12	39612	12"	3-5/8"	7/8"	2,850	8.5 #

*Depth From Center Of Screw To Frame.

540—2-1/2, 540—3, 540—4, 540—5, 540—6 Standard Pack—6 Per Box.

540—8, 540—10, 540—12 Bulk Packed.

HARGRAVE 540 SERIES C-CLAMP DISPLAY

Assortment includes: 2 Each: 540-2-1/2, 540-3, 540-8.

4 Each: 540-4, 540-6.

Dimensions: 24"x24" Weight: 34 Lbs.

INDEX AND PART NO.-EDP NO. CROSS REFERENCE CHART

TOOL NUMBER	EDP NUMBER	PG. NO.	TOOL NUMBER	EDP NUMBER	PG. NO.	TOOL NUMBER	EDP NUMBER	PG. NO.	TOOL NUMBER	EDP NUMBER	PG. NO.	TOOL NUMBER	EDP NUMBER	PG. NO.
Ken-Tool®			T23	32123	4	T96	35696	3	TR5	32318	4	604-1/2M3	36745	16
			T23A	33223	4	T98	35998	8	TR6	32316	4	605M3	36750	16
B37	32037	12	T23B	33224	4	T99B	35999	8	TR7	34407	10	606M3	36760	16
B38	32038	12	T25	32125	4	T100	34670	8	TR8	34408	10	608M3	36780	16
B39	32039	12	T26A	32126	8	T101	36001	9	TR9	32509	4	1035	36935	17
B111	30511	13	T26B	35926	8	T102	36002	9	TR10	34401	4	1045	36945	17
B260	31360	11	T27	32127	4	T104	36004	9	TR11	34402	4	2040	36940	17
D105A	35805	13	T27A	32128	4	T105	36005	9	TR41	34441	10	2050	36950	17
G12	30312	12	T31	35315	6	T106	36006	9	TR42	34442	10	2060	36960	17
G14	30314	12	T32	35310	6	T115	36015	8	TR43	34543	10	H12	37309	6
G17	30317	12	T33R	35317	6	T123	36023	12	TR44SW	34547	10	80H-2	37002	7
G39	31039	12	T34	35321	6	T130	31430	13	TR44X	34545	10	80H-3	37003	7
OS18	31118	12	T34RH	35105	6	T132	31432	13	TR97	32317	4	80H-4	37004	7
T1X	32101	5	T35	35323	6	T133	31433	13	TR98	32508	4	84H-2	37302	7
T2X	32102	5	T36	35325	6	T135B	30435	11	TX9	30609	4	84H-4	37304	7
T6A	32106	5	T38	33238	5	T143A	34660	5	COLUMBIAN®			84H-6	37306	7
T10	31510	11	T39	33329	5	T147A	35847	13				84H-8	37308	7
T11B	35311	6	T40	32140	8	T240	36040	9	D43-1/2	36443	16	84H-10	37310	7
T11BH	35111	6	T41	33341	8	T242	36042	9	D44	36444	16	84H-12	37312	7
T11C	35319	6	T42	33342	8	T250	36050	9	D45	36445	16	84H-16	37316	7
T11CH	35119	6	T45A	34645	5	T254	36054	9	D46	36446	16	84H-20	37320	7
T11D	35327	6	T46	34746	5	T9515	35615	3	125	36301	18	85H-3	37103	7
T11DH	35127	6	T46A	34747	5	T9520	35620	3	203-1/2M3	36835	17	44-1	39401	19
T11E	35329	6	T46B	34748	5	TG11B	35411	6	204-1/2M3	36845	17	44-1-1/2	39400	19
T11EH	35129	6	T46C	34749	5	TG11BH	35211	6	205M3	36850	17	44-2	39402	19
T11EW	35101	7	T47	34846	5	TG11C	35419	6	206M3	36860	17	44-3	39403	19
T11HN	35113	6	T47A	34847	5	TG11CH	35219	6	225	36303	18	44-4	39404	19
T11R	35313	6	T47B	34848	5	TG11D	35427	6	235	36401	17	44-6	39406	19
T11RH	35104	6	T47C	34849	5	TG11DH	35227	6	414	36414	16	44-8	39408	19
T11W	35103	7	T48A	34648	4	TG11E	35429	6	415	36415	16	44-10	39410	19
T11WH	35102	7	T49	32049	8	TG11EH	35229	6	503M3	36630	16	44-12	39412	19
T12B	35201	7	T50	33350	8	TG11R	35413	6	504M3	36640	16	400-2	39502	19
T12D	35202	7	T52	34652	8	TG31	35415	6	503-1/2M3	36635	16	400-3	39503	19
T14	30214	11	T53	31553	11	TG31H	35206	6	504M3	36640	16	400-4	39504	19
T15	30515	13	T54	31554	11	TG33R	35417	6	504-1/2M3	36645	16	400-6	39506	19
T16	30216	11	T56	35656	3	TG34	35421	6	505M3	36650	16	400-8	39508	19
T16D	30217	11	T57	35657	3	TG35	35423	6	506M3	36660	16	400-10	39510	19
T16E	30218	11	T59	35659	3	TG36	35425	6	508M3	36680	16	400-12	39512	19
T19	32119	5	T61	35661	3	TG37	35431	6	563	36530	18	540-2-1/2	39602	19
T19A	33219	5	T62	35662	3	TG37H	35231	6	563-1/2	36535	18	540-3	39603	19
T20	32120	5	T63	35663	3	TR1	32501	4	564	36540	18	540-4	39604	19
T20A	33220	5	T67	31567	11	TR2	32502	4	565	36550	18	540-5	39605	19
T21R	32121	5	T68	31568	11	TR2X	32504	4	566	36560	18	540-6	39606	19
T22	32122	4	T90	35690	3	TR3	32503	4	568	36580	18	540-8	39608	19
			T95	35695	3	TR3A	32505	4	603M3	36730	16	540-10	39610	19
			T95A	35697	3	TR3X	32506	4	603-1/2M3	36735	16	540-12	39612	19
						TR4	32314	4	604M3	36740	16			

INDEX AND EDP NO.- PART NO. CROSS REFERENCE CHART

EDP NUMBER	TOOL NUMBER	PG. NO.	EDP NUMBER	TOOL NUMBER	PG. NO.	EDP NUMBER	TOOL NUMBER	PG. NO.	EDP NUMBER	TOOL NUMBER	PG. NO.	EDP NUMBER	TOOL NUMBER	PG. NO.
Ken-Tool®			32501	TR1	4	35119	T11CH	6	35805	D105A	13	36835	203-1/2M3	17
			32502	TR2	4	35127	T11DH	6	35847	T147A	13	36845	204-1/2M3	17
30214	T14	11	32503	TR3	4	35129	T11EH	6	35926	T26B	8	36850	205M3	17
30216	T16	11	32504	TR2X	4	35201	T12B	7	35998	T98	8	36860	206M3	17
30217	T16D	11	32505	TR3A	4	35202	T12D	7	35999	T99B	8	36935	1035	17
30218	T16E	11	32506	TR3X	4	35206	TG31H	6	36001	T101	9	36940	2040	17
30312	G12	12	32508	TR98	4	35211	TG11BH	6	36002	T102	9	36945	1045	17
30314	G14	12	32509	TR9	4	35219	TG11CH	6	36004	T104	9	36950	2050	17
30317	G17	12	33219	T19A	5	35227	TG11DH	6	36005	T105	9	36960	2060	17
30435	T135B	11	33220	T20A	5	35229	TG11EH	6	36006	T106	9	37002	80H-2	7
30511	B111	13	33223	T23A	4	35231	TG37H	6	36015	T115	8	37003	80H-3	7
30515	T15	13	33224	T23B	4	35310	T32	6	36023	T123	12	37004	80H-4	7
30609	TX9	4	33238	T38	5	35311	T11B	6	36040	T240	9	37103	85H-3	7
31039	G39	12	33239	T39	5	35313	T11R	6	36042	T242	9	37302	84H-2	7
31118	OS18	12	33341	T41	8	35315	T31	6	36050	T250	9	37304	84H-4	7
31360	B260	11	33342	T42	8	35317	T33R	6	36054	T254	9	37306	84H-6	7
31430	T130	13	33350	T50	8	35319	T11C	6	COLUMBIAN®			37308	84H-8	7
31432	T132	13	34401	TR10	4	35321	T34	6	36301	125	18	37309	H12	6
31433	T133	13	34402	TR11	4	35323	T35	6	36303	225	18	37310	84H-10	7
31510	T10	11	34407	TR7	10	35325	T36	6	36401	235	17	37312	84H-12	7
31553	T53	11	34408	TR8	10	35327	T11D	6	36401	235	17	37316	84H-16	7
31554	T54	11	34441	TR41	10	35329	T11E	6	36414	414	16	37320	84H-20	7
31567	T67	11	34442	TR42	10	35411	TG11B	6	36415	415	16	39400	44-1-1/2	19
31568	T68	11	34543	TR43	10	35413	TG11R	6	36443	D43-1/2	16	39401	44-1	19
32037	B37	12	34545	TR44X	10	35415	TG31	6	36444	D44	16	39402	44-2	19
32038	B38	12	34547	TR44SW	10	35417	TG33R	6	36445	D45	16	39403	44-3	19
32039	B39	12	34645	T45A	5	35419	TG11C	6	36446	D46	16	39404	44-4	19
32049	T49	8	34648	T48A	4	35421	TG34	6	36530	563	18	39406	44-6	19
32101	T1X	5	34652	T52	8	35423	TG35	6	36535	563-1/2	18	39408	44-8	19
32102	T2X	5	34660	T143A	5	35425	TG36	6	36540	564	18	39410	44-10	19
32106	T6A	5	34670	T100	8	35427	TG37H	6	36550	565	18	39412	44-12	19
32119	T19	5	34746	T46	5	35429	TG11D	6	36560	566	18	39502	400-2	19
32120	T20	5	34747	T46A	5	35431	TG11E	6	36580	568	18	39503	400-3	19
32121	T21R	5	34748	T46B	5	35615	T937	6	36630	503M3	16	39504	400-4	19
32122	T22	4	34749	T46C	5	35615	T9515	3	36635	503-1/2M3	16	39506	400-6	19
32123	T23	4	34846	T47	5	35620	T9520	3	36640	504M3	16	39508	400-8	19
32125	T25	4	34847	T47A	5	35656	T56	3	36645	504-1/2M3	16	39510	400-10	19
32126	T26A	8	34848	T47B	5	35657	T57	3	36650	505M3	16	39512	400-12	19
32127	T27	4	34849	T47C	5	35659	T59	3	36660	506M3	16	39602	540-2-1/2	19
32128	T27A	4	35101	T11EW	7	35661	T61	3	36680	508M3	16	39603	540-3	19
32140	T40	8	35102	T11WH	7	35662	T62	3	36730	603M3	16	39604	540-4	19
32314	TR4	4	35103	T11W	7	35663	T63	3	36735	603-1/2M3	16	39605	540-5	19
32316	TR6	4	35104	T11RH	6	35690	T90	3	36740	604M3	16	39606	540-6	19
32317	TR97	4	35105	T34RH	6	35695	T95	3	36745	604-1/2M3	16	39608	540-8	19
32318	TR5	4	35111	T11BH	6	35696	T96	3	36750	605M3	16	39610	540-10	19
			35113	T11HN	6	35697	T95A	3	36760	606M3	16	39612	540-12	19
									36780	608M3	16			